

Rock Products and BUILDING MATERIALS

INCORPORATING DEALERS BUILDING MATERIAL RECORD

Volume XVII.

CHICAGO, ILL., JANUARY 22, 1916.

Number 6



Hydrating Plant, Kiln Battery and Stone Plant
Steacy & Wilton, Bittinger, Pennsylvania



6 Keystone Kilns, Union Carbide Co.
Sault Sainte Marie, Michigan



4 Keystone Kilns, Companhia Fabricadora De Cal
Sao Paulo, Brazil

Success in Lime Manufacture

The constructing engineers and the manufacturing equipment are the most important parts of every successful lime operation. Correct design

—a complete understanding of the lime producer's problems—the latest type of equipment—are the points that insure success.

The Steacy-Schmidt Manufacturing Company, with a life long experience in the lime producing field, and with a corps of expert designers and engineers, offers the **utmost** in efficient lime plant installation. A recent order from the Union Carbide Co. illustrates the value of a Steacy-Schmidt installation:—After operating six Steacy-Schmidt kilns successfully for over ten years, this company has recently ordered six new kilns, in addition to the present plant. This order is particularly interesting, as the Union Carbide Co. maintains an engineering force second to none and has made an exhaustive study of lime burning.

The Steacy-Schmidt Manufacturing Company are "success builders" for the lime industry—in the installation of crusher plants, lime kilns and hydrating plants. Its engineering department will be pleased to discuss your problems or proposition with you at any time.

Steacy-Schmidt Mfg. Co.
YORK, PENNSYLVANIA

Manufacturers of the famous Keystone Kilns—183 now in use

Giant BELT for Your Drives
Granite BELT for Your Elevators
Supremo BELT for Your Conveyors

WHY? ASK US.

Revere Rubber Co.

BOSTON NEW YORK CHICAGO NEW ORLEANS PHILADELPHIA

Clinchfield Portland Cement Corporation

General Office and Mills:
 Kingsport, Tenn.

Strong
 &
 Sound



Fine
 &
 Uniform

"The Acknowledged New Standard of the South"

Annual Capacity
 1,500,000 Barrels

Sales Offices:
 KINGSFORT, TENN.

1305 Union Trust Bldg. 908 Com'l Bank Bldg. 413-15 Am. B'k & Tr. Bldg.
 CINCINNATI, OHIO CHARLOTTE, N. C. SAVANNAH, GA.



Patented

"PENNSYLVANIA"

Hammer Crushers For Crushing and Pulverizing Limestone, Gypsum, Marl, Shale, Etc.
 Main Frame of Steel, "Ball and Socket" Self-aligning Bearings; forged Steel Shaft; Steel Wear Liners; Cage adjustable by hand wheel while Crusher is running.
 No other hammer Crusher has such a big Safety Factor.

Pennsylvania Crusher Co.

New York PHILADELPHIA Pittsburgh

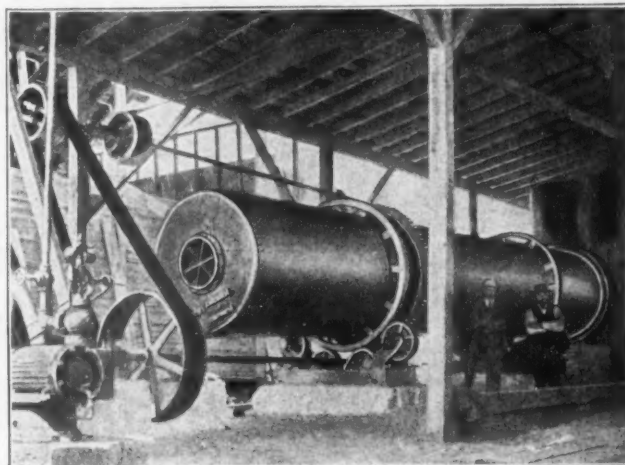
CONSISTENT ADVERTISING

UNLIKE THE PROVERBIAL ROLLING STONE
 GATHERS MOSS

RUGGLES-COLES DRYERS

STATIONARY AND PORTABLE

"Built to Dry at the Lowest Ultimate Cost"



Seven different types of dryers in many sizes and special dryers designed and built to meet unusual conditions. We are now drying 67 kinds of materials, among them sand, rock, gravel, gypsum, coal, clay, etc.

Our many years of experience is at your service

Ruggles-Coles Engineering Co.

CHICAGO OFFICE,
 McCormick Bldg.

50 Church Street
 NEW YORK

Daily Capacity
 9000 Barrels



Quality
 Quantity
 Service

MORE THAN FIFTEEN YEARS OF SATISFACTION

FOUR PLANTS:

ALPENA, DETROIT, WYANDOTTE and CLEVELAND

HURON and WYANDOTTE

Great Water and Rail Facilities
 Best Serve the Entire Middle West

EVERY BARREL TESTED AND GUARANTEED
 SOLD BY THE BEST DEALERS

USED BY THE BEST BUILDERS

Main Offices: 1525 Ford Building, Detroit, Mich.

Daily Capacity
 9000 Barrels



Quality
 Quantity
 Service

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

, 1910.

A"

Lime
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Every Manufacturer of Concreting Machinery

who is an exhibitor at the Ninth Chicago Cement Show will have specimens of the best work his machine can do. These specimens will be marked with the name of the manufacturers and the names of the machines that made them.

Contractors who use these machines will there find how they can improve their work and how they can secure the best possible results.

Such a display has never before been made and nowhere else is there an opportunity for seeing such an accumulation of concrete talent. Machinery manufacturers will be on review, and you can confidently expect to see the best work modern methods can produce. Such a display alone will well repay a visit to the

**NINTH CHICAGO
CEMENT SHOW
COLISEUM AND ARMORY
FEBRUARY 12 TO 19**

*Under Management of
Cement Products Exhibition Co.
210 South La Salle Street
Chicago*

The Brainard Pulverizer

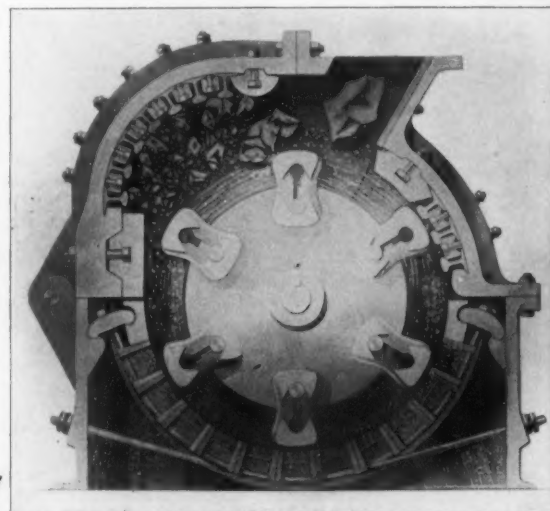
—is made in four sizes and is a CRUSHER as well as a PULVERIZER and POSITIVELY does not grind the material. It works by impact only, and will handle either wet or dry feed.

The Capacity is based on a finished product where all of the material will pass through a $\frac{1}{8}$ " opening and 90% will be finer than 20 mesh.

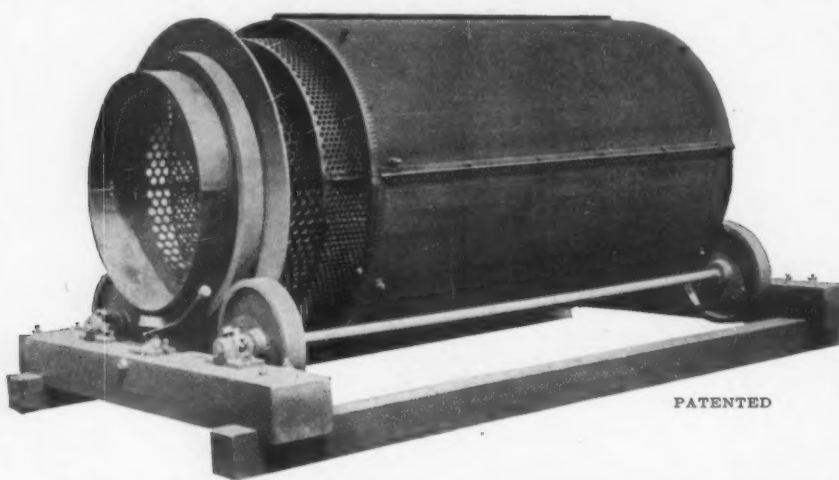
All principal wearing parts are made of the best grade of manganese steel, and the casing is steel lined throughout.

Size	Size Feed	Capacity Tons Per Hour	H. P. Required	Approximate Weight
0	4"x 4"	2 to 4	6 to 8	1600 lbs.
1	4"x 6"	3 to 6	10 to 12	2600 lbs.
2	6"x 10"	8 to 12	20 to 22	5400 lbs.
3	9"x 12"	18 to 24	40 to 50	17000 lbs.

**Midland
Crusher-Pulverizer Co.**
Old Colony Building
Chicago



No. 3 Brainard Patent Pulverizer.



Johnston & Chapman Co.
2921 Carroll Avenue, CHICAGO

For Dry Screening Gravel

we make the most up-to-date machine on the market. Simple and Inexpensive.

A New Jacketed Type of Cone Screen for Washing Gravel. A Perfect Screen.

Complete Gravel Washers of Any Size. Successfully used in several of the largest gravel plants in the United States.

Another of Our Products that Can't be Beat

The O'Laughlin Screen

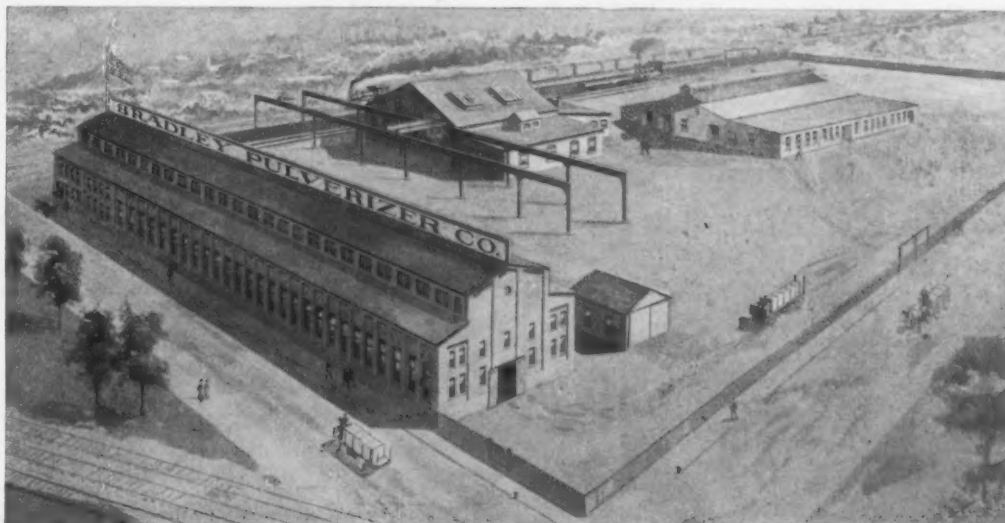
for Crushed Stone
See Illustration

SCREEN SECTIONS for ALL SIZES of REVOLVING SCREENS

CONICAL SCREEN SHELLS
FOR GRAVEL WASHING PLANTS

Everything in Screens Made Right, for
Crushed Stone, Gravel, Sand, Clay, Ore, Etc.

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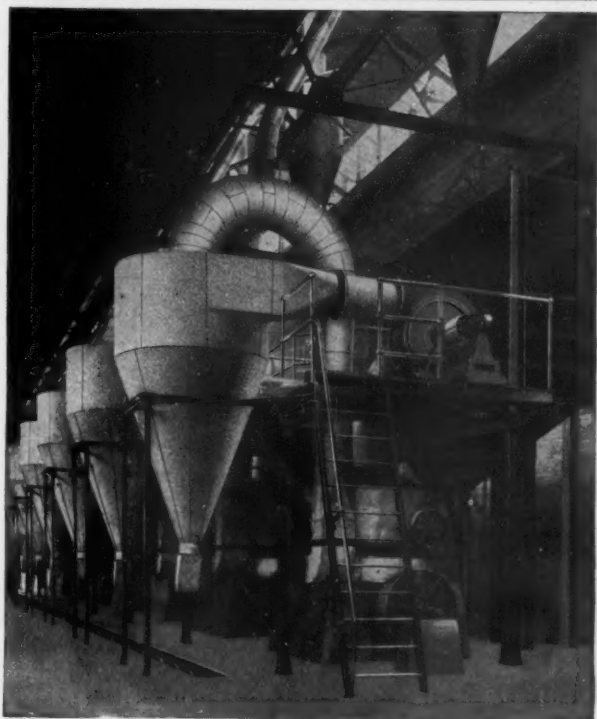
THE NEW WORKS OF AN OLD COMPANY

OUR INCREASING BUSINESS HAS DEMANDED LARGER QUARTERS FOR THE MANUFACTURING OF THE GIANT GRIFFIN, BRADLEY THREE ROLL AND BRADLEY HERCULES MILLS. OUR NEW WORKS AT ALLENTOWN, PA., ARE IN FULL OPERATION AND OPEN FOR INSPECTION

BRADLEY PULVERIZER CO.

BOSTON, MASS.

WORKS: ALLENTOWN, PA.



Raymond System as installed in a Cement Plant for grinding raw material or coal

We design special machinery and methods for Pulverizing, Grinding, Separating and Conveying all powdered products. We manufacture Automatic Pulverizers, Roller Mills, Vacuum Air Separators, Crushers, Special Exhaust Fans and Dust Collectors.

Send for Our Literature

Do You Grind Material Such as Coal, Limestone, Hydrated Lime Phosphate Rock, Clay, Gypsum

If so, investigate the advantages and economies of the

RAYMOND PULVERIZING-SYSTEM AIR SEPARATING

which is used as a standard for the grinding of these materials in more than 150 plants throughout the country. The results obtained by the Raymond System have proved that this system of fine grinding is the most desirable and economical.

The Raymond System is a complete unit in itself, as it takes the raw material direct from the storage bins, pulverizes it and delivers the finished product to sackers or next point in process of manufacture.

No screens, conveyors or elevators are necessary, as the material is air-bolted to obtain the required fineness and the same air carries the finished product to the storage bins.

And the whole operation is **Absolutely Dustless.**

The extent of the economies produced by this method in many plants is astonishing.

It cuts down that big item of expense, **Repair Cost.**

What is it worth to **you** to cut down the grinding costs in **your** plant?

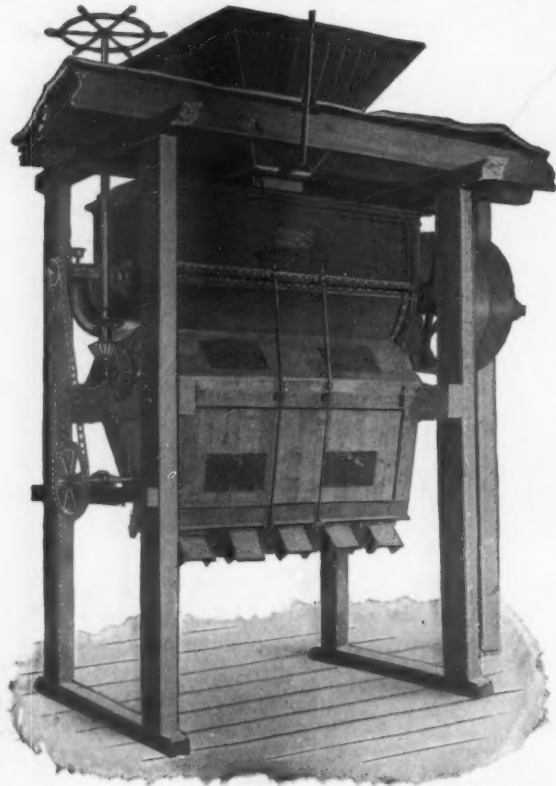
Raymond System will do it; let us prove it.

Send for our Book.

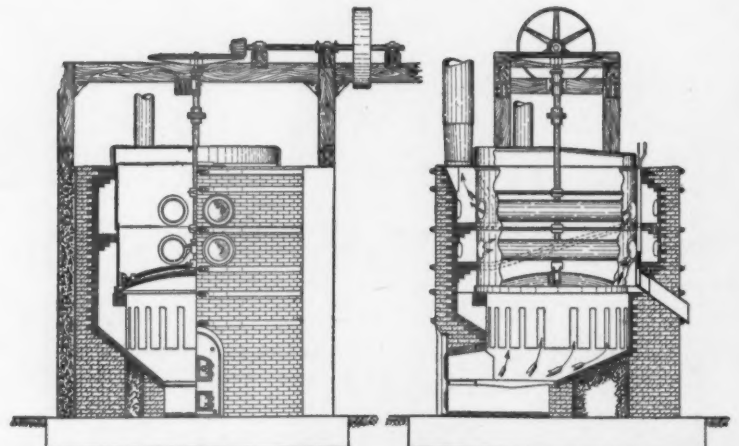
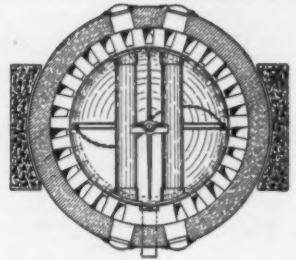
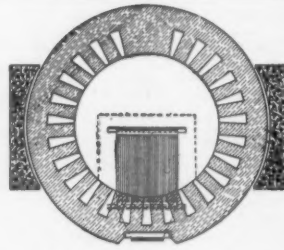
RAYMOND BROS. IMPACT PULVERIZER CO.

1301 N. Branch St., Chicago, Ill.

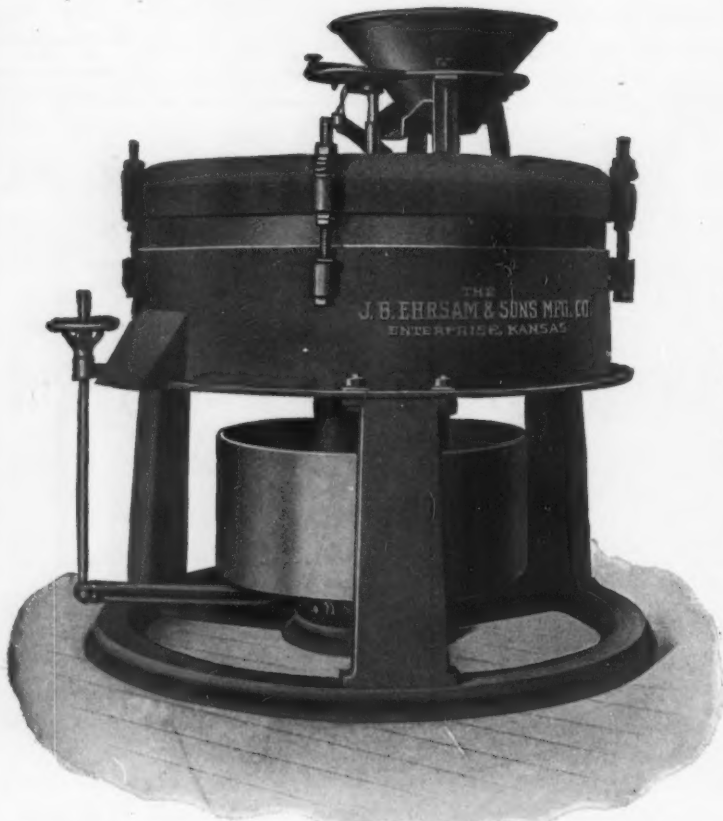
Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS



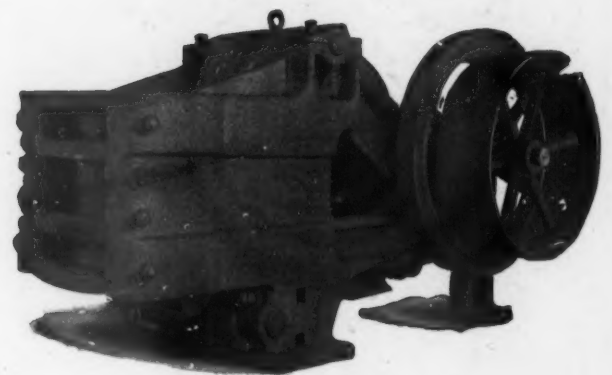
Enterprise Noiseless Mixer



Ehrsam Calcining Kettles—Built in 5 sizes—6-8-10-12-14 feet in diameter, having capacity of from 3 tons to 20 tons to the charge



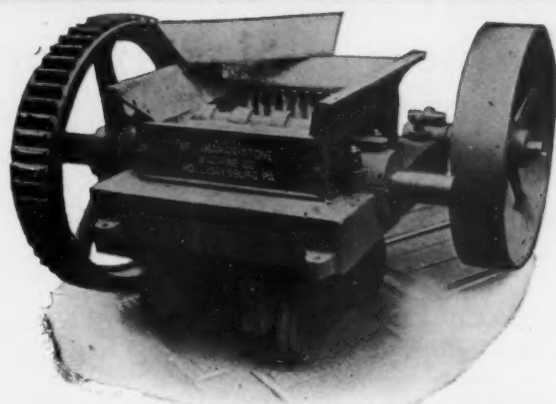
Horizontal and Vertical Heavy Duty Grinding Mills



Jaw Crushers Built in all sizes up to 24" x 34" jaw opening. Rotary Fine Crushers in sizes up to 42" inside diameter.

The J. B. Ehrsam & Sons Mfg. Co., ENTERPRISE, KANSAS
Manufacturers of Plaster Mill Machinery, Conveying, Elevating and Power Transmission Appliances

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS



OUR SINGLE ROLL CRUSHER IS AS SIMPLE AS CAN BE

Is easily fed, makes less fines than either a Gyratory or Jaw. Capacity 5 to 500 tons per hour. For crushing Limestone, Dolomite, Hard Rock, Phosphate, Cinders, Etc. Screens of all descriptions. Washers for dirty stone.

Ask for Information

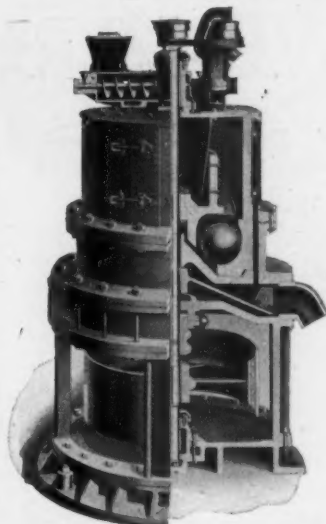
McLANAHAN-STONE MACHINE CO., Hollidaysburg, Pa.

**BACON \ FARREL
ORE & ROCK
CRUSHING \ WORLD KNOWN
ROLLS-CRUSHERS**
EARLE C. BACON, ENGINEER
HAVEMEYER BUILDING, NEW YORK

The Fuller-Lehigh Pulverizer Mill

A Complete Self-Contained Unit

**The most economical mill for producing
Agricultural Limestone**



- Reduces lump rock to 20, 40, 60, 80, 100, or 200 mesh.
- Requires no outside accessory equipment.
- Requires no overhead shafts, drives or screens.
- All material discharged from mill is finished product.
- No inside journals or bearings.
- No inside lubrication.
- Uniform feeding system.
- Constant and free discharge.
- Low installation cost.
- Low operating cost.
- Low lubricating cost.
- Dustless operation.

Built in sizes to meet the requirements of your trade. Grinds rock to meet the specifications of all Agricultural Experiment Stations.

SEND FOR CATALOG NO. 70

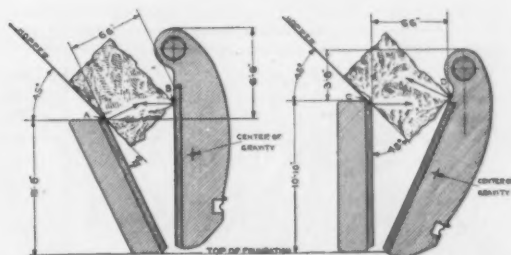
Lehigh Car, Wheel & Axle Works
Main Office and Works: **Catasauqua, Penna.**

The Success of A. C. Steel Frame 84" x 66" Jaw Crusher Is Due to Its Improved Design

Embodying the

Vertical Swing Jaw

As Illustrated by a Comparison of Receiving
Openings, Inclined Versus Vertical Swing Jaw



Sketch No. 1:
Allis-Chalmers Vertical Swing Jaw

Sketch No. 2:
Old Inclined Swing Jaw

Improvements in Feeding

Sketch No. 1 shows a block of stone 4'-6"x6'-6", as it would naturally be delivered to the crusher. Note that the stone strikes the moving jaw at a point considerably below the fulcrum point and within the crushing zone. A stone in this position will be crushed, or positively forced into the crusher as the reaction from the surfaces at points A and B intersect each other, thereby preventing any tendency to lift the stone out of the crusher.

Referring to Sketch No. 2, where a block of stone of the same size is shown, note that the stone strikes the moving jaw near the fulcrum point, where there is little motion, entirely outside of the crushing zone, and above the jaw plates. A stone in this position will not be crushed, as the reaction from the surfaces at points C and D do not intersect, and the tendency of these forces is to lift the stone out of the crusher.

In Sketch No. 1 the stone has to turn only 20 degrees to rest flat against the stationary jaw, while in Sketch No. 2 the stone must turn 45 degrees to take the same position.

Note the difference in height of the two types of crusher, measuring from top of foundation to top of stationary jaw plate. Also note that with construction shown in Sketch No. 1 there is much less chance for material to jump over top of the moving jaw.

Improvements in Operating

When taking up wear of jaw plate or inserting new plates, both back and front toggles as well as the shims behind toggle block are readily freed on account of the tendency of the vertical swing jaw (Sketch No. 1) and of the pitman to swing forward because their center of gravity is located behind their respective point of support.

This is an important operating feature considering the great weight of the affected parts.

SMALLER JAW CRUSHERS DOWN TO LABORATORY SIZE

**Complete Rock Crushing Plants
and Cement Mills—Power Plants—
Electric Motors—Gates Gyratory Breakers**

Allis-Chalmers Manufacturing Company

OFFICES IN ALL PRINCIPAL CITIES

MILWAUKEE,

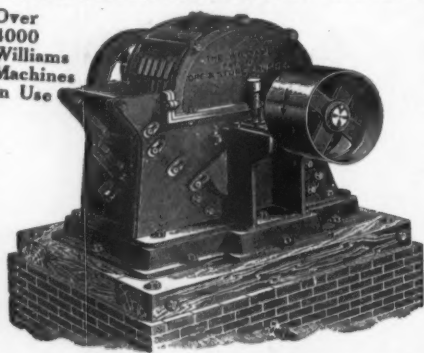
WISCONSIN

For All Canadian Business
Refer to Canadian Allis-Chalmers, Ltd., Toronto, Ont.

FOREIGN REPRESENTATIVES—Chile and Bolivia: Mark E. Lamb, Huastacas 1157, Casilla 2655, Santiago, Chile. **Europe, East Indies, etc.:** H. L. Keen, 732 Salisbury House, London Wall, London, England. **South Africa:** Herbert Ainsworth, P. O. Box 6659, Johannesburg. **Australia:** Frank R. Perrot, 883 Hay St., Perth, W. A., and 204 Clarence St., Sydney, N. S. W. **South America, China, Philippine Islands, Japan:** American Trading Co.

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

Over
4000
Williams
Machines
in Use



Lump Lime Crushers and Grinders

We specialize in extra heavy crushers for lump lime—for hydrating or for agricultural work

SPECIFICATIONS

SIZE	WEIGHT	CAPACITY TONS HOUR TO 1/4"	CAPACITY TONS HOUR 8 MESH.	H. P.
No. 1	7000 lbs.	8-10	6-8	20-25
No. 2	8500 lbs.	10-15	8-10	30-35
No. 3	12000 lbs.	15-18	12-15	40-50

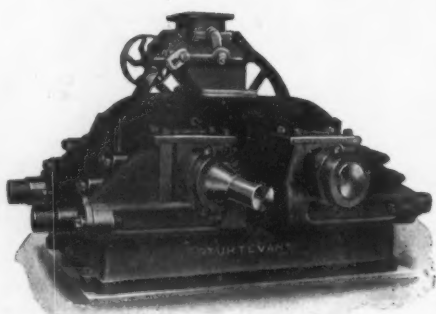
A FEW USERS

Kelly Island and Lime Co.
National Lime & Stone Co.
U. S. Gypsum Co.
Tidewater Ft. Cement Co.

ALSO MADE IN SIX LARGER SIZES — WE ALSO MAKE A FULL LINE OF LIMESTONE CRUSHERS AND GRINDERS. WRITE FOR BULLETIN No. 4

General Sales Dept., Old Colony Bldg., CHICAGO, ILL.
2705 N. Broadway, ST. LOUIS, MO.
268 Market St., SAN FRANCISCO, CAL.

The Williams Patent Crusher & Pulverizer Co.



STURTEVANT MACHINERY

CRUSHERS

GRINDERS

SCREENS

Thirty Years of Practical Experience has taught us that no one machine is adapted to all purposes. Customers expect correctly designed machines for their special work. Our large line enables one to select properly. It consists of:

CRUSHERS—For coarse, medium and fine work on hard or soft rock. Jaw, Rotary and Hammer design.

CRUSHING ROLLS—Coarse, medium and fine. Hard or soft rock—wet or dry.

RING-ROLL MILLS—For pulverizing hard materials.

EMERY MILLS and HAMMER-BAR MILLS—For pulverizing softer materials.

SCREENS—Inclined Vibrating and Rotary for fine or coarse work—wet or dry.

Send for Catalogue.

STURTEVANT MILL CO., Boston, Mass.

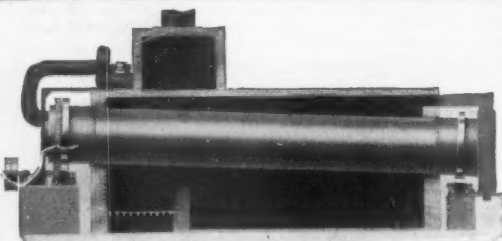
NEW YORK

CHICAGO

DENVER

PITTSBURGH

LONDON, ENG.

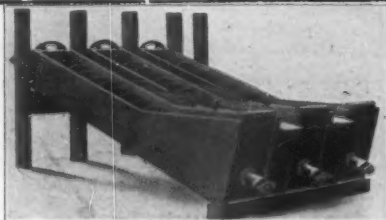


We make the
largest variety
of
**MECHANICAL
DRYERS**

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We are also Engineers and Manufacturers of
Car Hauls
Crushers and Pulverizers
Drop Forged Chain
Elevators and Conveyors
Soft Mud Brick Machinery
Feeders
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Mixing Machinery
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Screens

THE C. O. BARTLETT & SNOW CO., Cleveland, Ohio



Sand Washers



9-Foot Dry Pan

LEWISTOWN FOUNDRY & MACHINE CO.
LEWISTOWN, PA.

Builders of heavy duty crushers and glass sand machinery
Glass sand plants equipped complete

WRITE FOR PRICES AND CATALOG

Wasted Power Is Expensive

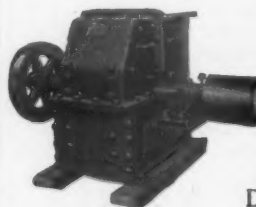
The Machine Which Saves Power, Saves Money

The ALL-STEEL No. 1

K-B PULVERIZER

consumes low power, and
gives high capacity. Using
10-15 H. P., it will reduce 4-7
tons of stone, or 8-13 tons of
lime from 3" to dust.

These machines are the result of years of experience, as well as careful analysis of the action of hammer mills. They have been built to supply the need for a moderate priced pulverizer, which is practical, efficient, and strong enough to stand the terrific wear to which it is subjected. They are constructed entirely of steel, and lined throughout with hardened steel plates. The hammers are adjustable to compensate for wear, and the screens slide out to afford easy access to the inside of the pulverizer.



Write today for Catalogue to

K-B Pulverizer Co., Inc.

86 Worth St. New York City

Designed for Service and Durability

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS



AUSTIN GYRATORY CRUSHERS

Made in Eight Sizes

50 to 5000 Tons Per Day

Plans and Specifications submitted and expert advice free on any problems involving rock-crushing or earth-handling.

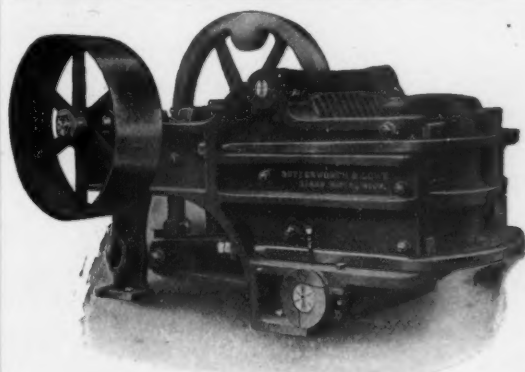
AUSTIN MANUFACTURING CO.

New York Office: 50 CHURCH STREET

CHICAGO

Canadian Agents: MUSSENS, Ltd., Montreal

We manufacture:—Road and Elevating Graders, Scarifiers, Road Rollers, Quarry Cars, Dump Wagons, Stone Spreaders, Street Cleaning Machinery.



Jaw and Rotary CRUSHERS

For all Rocks and Ores Softer than Granite

GYPSUM MACHINERY—We design modern Plaster Mills and make all necessary Machinery, including Kettles, Nippers, Crackers, Buhns, Screens, Elevators, Shafting, etc.

Special Crusher-Grinders for Lime

Butterworth & Lowe

17 Huron Street,

Grand Rapids, Mich.

Nippers—17 x 19", 18 x 26", 20 x 30", 24 x 36" and 26 x 42"



Crackers—6 sizes—many variations.

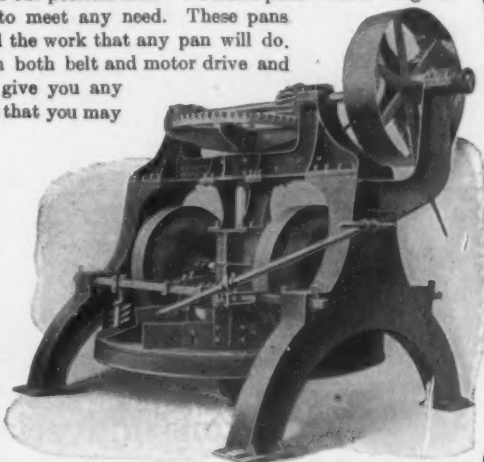
YOUR PAN NEEDS

THIS pan is the identical pan required for your plant and it should speak to you convincingly of our pan quality. It has put many Sand-Lime Brick Plants on a paying basis and will make money for you. There is no line of pans made which will compare with the "Built Right, Run Right" line and your needs can be fully taken care of from our peerless line. We build pans with a range in size and capacity to meet any need. These pans are adapted for all the work that any pan will do. We have them in both belt and motor drive and will be pleased to give you any points on our pans that you may inquire about. A poor pan is an expensive proposition. Its inefficiency shows in the quality of your product and the size of your repair bills. It also limits your capacity by handicapping the rest of the equipment. Real economy would suggest that your pans be the best possible. We will be pleased to talk pans or any other equipment with you.

We Build Complete Equipments for Sand-Lime and Clay Brick Plants

The American Clay Machinery Co.

Willoughby, Ohio, U. S. A.



DO YOU KNOW

that

The Gruendler Pulverizer

is planned and built to meet the most exacting requirements?

IF YOU ARE NOT FAMILIAR WITH OUR MACHINE, IT WILL PAY YOU TO INVESTIGATE AT ONCE

Write for Details

GRUENDLER PATENT CRUSHER & PULVERIZER CO.
924-928 North First Street ST. LOUIS, MO.

HOISTING rope of every description for elevators, mines, coal hoists, ore hoists, conveyors, derricks and cranes, stump pullers, steam shovels, dredges, skidder rope for logging, ballast, unloading. Towing hawsers, mooring lines, tiller rope, and ship's rigging. Power transmission. Suspension bridge cables. Rope for all haulage purposes. Flattened strand rope. Non-spinning rope. Steel clade rope. Flattened strand rope. Non-spinning rope. Steel clade rope. Locked coil track cable for aerial tramways. Flat rope.

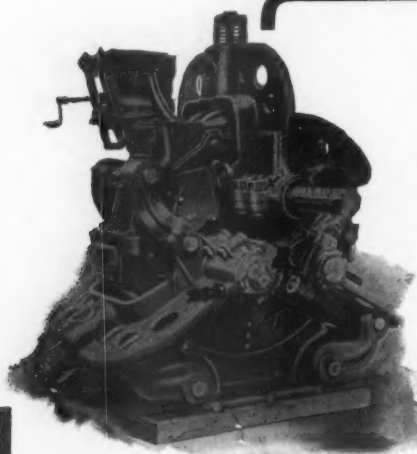
Special rope made to order to suit any purpose

American Steel & Wire Company

Chicago, New York, Worcester, Cleveland, Pittsburgh, Denver. Export Representative: U. S. Steel Products Co., New York. Pacific Coast Representative: U. S. Steel Products Co., San Francisco, Los Angeles, Portland, Seattle.

AWARDED the GRAND PRIZE at PANAMA-PACIFIC EXPOSITION

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MAXECON

Means MAXimum of ECONomy

Years of experience with the assistance of our hundreds of customers has found THE SOLUTION OF GRINDING HARD MATERIALS. The MAXECON PULVERIZER combines highest EFFICIENCY, greatest DURABILITY and assured RELIABILITY, Uses the LEAST HORSE POWER per capacity. Embodies the features of our Kent Mill with improvements that make it MAXECON.

WE DO NOT CLAIM ALL of the CREDIT for this achievement

We have enjoyed the valuable suggestions of the engineers of the Universal Portland Cement Co. (U. S. Steel Corp.), Sandusky P. C. Co., Chicago Portland C. Co., Marquette Cement Mfg. Co., Western P. C. Co., Cowham Engineering Co., Ironton P. C. Co., Alpena P. C. Co., Castalia P. C. Co., Pennsylvania P. C. Co., and many other patrons.

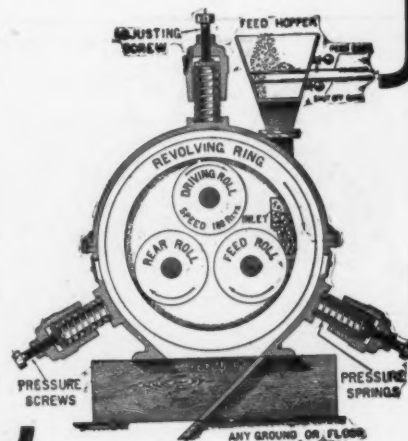
THE RING WOBBLES

The FREE WOBBLING POUNDING RING instantly and Automatically ADAPTS its position to the variations of work.

Its GRINDING ACTION is DIFFERENT than any other; besides the STRAIGHT rolling action of the rolls, the SIDE to SIDE motion of the ring makes the material subject to TWO crushing forces and DOUBLE OUTPUT results.

KENT MILL CO.

10 RAPELVEA ST., BOROUGH OF BROOKLYN, N. Y. CITY
LONDON, W. C., 31 HIGH HOLBORN
BERLIN-HOHENSCHONHAUSEN



SYMONS DISC CRUSHERS

Capacities of
5 to 120 Tons Per Hour

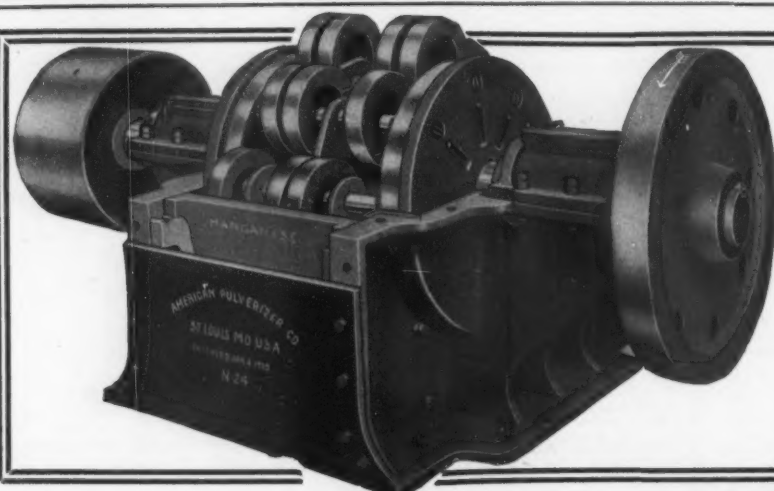
Over 500 Now in Operation
Eventually You Will Operate One

Symons Disc Crusher—Patented

Eventually—Symons Discs

CHALMERS & WILLIAMS

CHICAGO HEIGHTS, ILLINOIS, U. S. A.



Pulverize your limestone for agricultural purposes, glass purposes, concrete purposes, road purposes, sandstone into sand, glass cullet, manganese ore, 80% ferro-manganese, 50% ferro-silicon, slag, furnace linings, brick bats, coke, coal, shale, quartz, pyrite iron ore, phosphate rock, etc.

**Most tons pulverized
to given fines with
least operating cost**

Write us description of material—number tons per hour—screen mesh and get our estimate and catalog

AMERICAN PULVERIZER CO., East St. Louis, Ill.

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

Are You Interested in Rock Crushing?

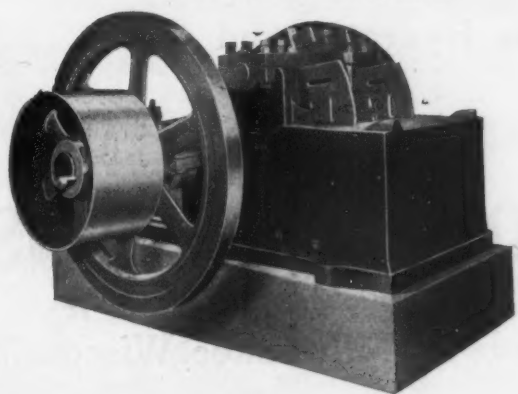
If you are, you will be interested in the following information

A PARTIAL DESCRIPTION OF THE PARTS OF THE BLAKE TYPE CRUSHER

The eccentric shaft is very large and accurately turned from solid stock of high grade carbon steel. The eccentric bumper, or cam, is very heavy, and is babbitted with a high grade of babbitt. The bumper receiving the movable jaw is very heavy and is protected on the bottom with a cast steel strip held securely in place with two bolts through the bumper. This steel strip, when worn, can be replaced at a small cost, thereby prolonging the life of the bumper indefinitely.

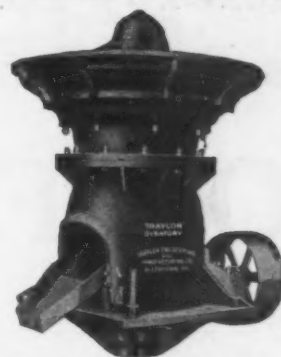
Write for Our Complete Catalog

Webb City and Carterville Foundry & Machine Works
Main Office, WEBB CITY, MO.



Crushing Machinery Built to Meet All Demands

Large eccentric bearing. Spider arranged for removal of the concaves without dismantling the crusher.

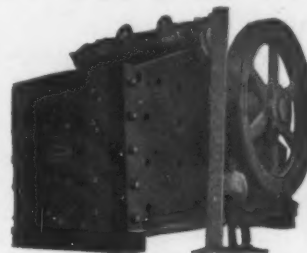


Shaft suspended at point of least motion.

Cast steel gear and pinion. Removable counter-shaft bearing.

Built in sizes from No. 2 up to No. 10.

Water-cooled pitman and pitman bearings. Removable bushings in pitman and pitman bearings.



Large openings allowing steam shovel operation.

Built in sizes up to 66" x 86".

Traylor Engineering & Manufacturing Co.
Works: Allentown, Penna.

Eastern Office: 24 Church St., New York City; Western Office: Salt Lake City



LAIDLAW Feather Valve COMPRESSORS

include features which greatly increase the return heretofore possible for money invested. These machines have established notable records for low operating costs.

Described in detail in Bulletin L-530-58.

Write for a copy

International Steam Pump Co.
Laidlaw-Dunn-Gordon Plant

115 Broadway, New York Works: Cincinnati, O.
Branch Offices in All Principal Cities

L231.2



Well Satisfied with the Jeffrey Loader

The Jeffrey Mfg. Co.,
77 Warren St.,
New York City.

Syracuse, N. Y., Feb. 24, 1915.

Gentlemen:—

The Jeffrey Loader which I bought from your Company a short time ago, is giving good service. We have used it for loading sand at our bed and find that we can load and screen about a yard a minute, with the assistance of one man. We are perfectly satisfied with the machine and are pleased to recommend the same.

Yours very truly,

Lyman Hutton

Bulletin No. 165-35 tells an interesting story of Loading Economy and contains many other splendid testimonials. Send for copy.

The Jeffrey Mfg. Company 935 NORTH COLUMBUS, O.
FOURTH STREET
New York Philadelphia Chicago Milwaukee Boston
Pittsburgh Birmingham Denver Montreal

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

Plasticity in the Process of Hydration

Has Been Developed to the Highest Efficiency

TOEPFER HYDRATOR

25,000,000 Sand Lime Brick manufactured with the fresh (often one hour) product of the Toepfer Hydrator, and not one swelled brick yet reported. Some test for a hydrator—Yes!

A Plaster Contractor on a very particular job liked hydrate from a Toepfer Hydrator so well that he threw all his other lime away. Some evidence of Plasticity—Sure!

Lime Hydrator and Outfit

furnished by

W. TOEPFER & SONS

Established 1855

183 Broadway, Milwaukee, Wisconsin

HYDRATED LIME

Its Marvelous Increase In Consumption

The Kritzer Service

Any lime can be successfully hydrated by our process; but whether your lime can be hydrated and successfully marketed is another question. We study your proposition and the possibilities of its commercial success, and advise you accordingly. Our ten years' experience in the business is a valuable assistance in this. Ours is not a mail order proposition. We investigate our customers' proposed plant thoroughly before we will enter into a contract with them. We turn down more prospects than we advise to go into the business. We can't afford to have any failures. Our customers' success is our success.

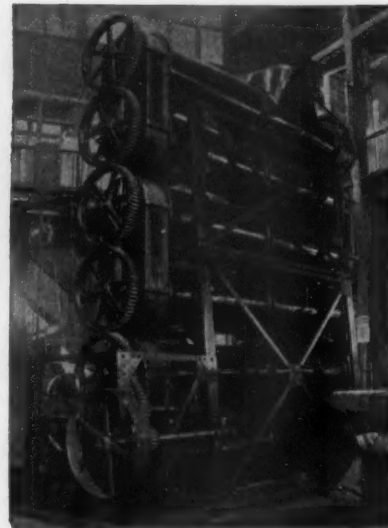
WRITE TO US

Are You Meeting the Increasing Demand for Hydrated Lime?

There is nothing forced or unnatural about the growing popularity of this product. It is a natural growth resulting from a widespread awakening to the advantages of Hydrated Lime for a variety of uses—as waterproofing for Concrete, in wall plaster, and in almost every case where lime is called for. In hydrated form it is weatherproof, more easily handled, and better adapted to modern methods, both of commerce and construction. A continued growth of the demand may hereafter be expected.

The Kritzer Way

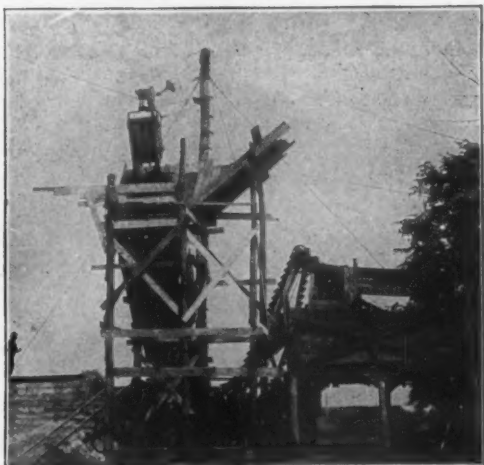
insures a product which will hold a continued place for itself on the market. We install plants complete, designed by our own expert engineers to meet your local conditions and turn out a uniform grade of Hydrated Lime of the highest standard, and with the greatest economy in cost of production. The Kritzer Continuous Hydrator, and the accessories installed with it, are the recognized standards in this line.



KRITZER CONTINUOUS
PROCESS

THE KRITZER COMPANY Chicago, Ill.

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS



Do You Know the Features of the Negley Excavator?

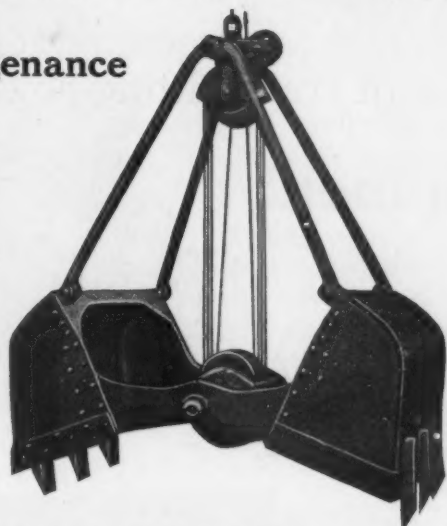
It is efficient and economical—
Low in maintenance and operation
cost—Designed by practical men

Our Engineering Department will be pleased
to assist you in your problems.

INDIANAPOLIS CABLE EXCAVATOR COMPANY
216-18 Massachusetts Ave., Indianapolis, Ind.

HAISS BUCKETS

**Maintenance
Cost**



An investigation of clam-shell buckets will promptly
disclose the superiority of Haiss buckets. Their strength
and rigidity eliminate the cost of repairs for years.
Our literature shows illustrations of a great variety of
work on which Haiss Buckets are used.

Catalogue No. 614 describes and illustrates Haiss High-Power
Digging Buckets.

Catalogue No. 1014 for Haiss Rehandling Buckets.

Write us now

George Haiss Mfg. Company, Inc.
146th St. and Rider Ave. New York City

It's a Hard Rock Shovel —the $\frac{3}{4}$ -yd. **ERIE**



From its heavy, one-piece, open hearth steel
truck to the tip of its armored-oak boom, the
 $\frac{3}{4}$ -yd. ERIE REVOLVING SHOVEL is built
for hard-rock work.

This Erie is shown working on a highway job
at Attica, N. Y. Read what the contractor's
superintendent says about it.

There is something more to the Erie besides
good material—it is built by men who know steam
shovels, in the way they know a shovel should be
built.

L. B. Shoredon, Superintendent for Fred E.
Gross & Sons, Yonkers, N. Y., who are handling
the above work, wrote us as follows:

"The shovel has proven to be superior
to any shovel of its size that I have ever
seen, both in ease of operation and
efficiency. It is certainly far ahead of
any revolving shovel that I have ever
used or seen used. I really can say nothing
but what would be a boost for the
ERIE Shovel. I have seen no weak
parts, whatsoever, so far."

Remember that you can't cut below grade with
an Erie (unless you want to). The Automatic
Crowding Motion holds your dipper true.

Yet you have the long, high reach of the
Shipper Shaft and can load a team in a bank 8 ft.
above grade and 23 ft. from the center of the
shovel.

Let us put all the facts before you
Write for Bulletin "S-12"

BALL ENGINE CO.



Dull Gravel Washing Plants Are Successful



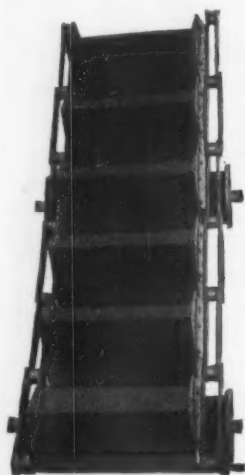
The illustration shows the Moline Sand Company, Moline, Ill., fully equipped with Dull machinery. It was designed by our engineers to meet special conditions and is giving excellent results. Our experience enables us to handle sand and gravel washing problems successfully under the most difficult conditions.

WE ALSO MANUFACTURE CABLEWAY EXCAVATORS, SMALL WASHING AND SCREENING OUTFITS, CONVEYORS, ELEVATORS, ETC.

Write for Catalog, "Plants for Washing Sand and Gravel"

THE RAYMOND W. DULL COMPANY

1914 Conway Building, Chicago, Ill.



Heavy Bucket Elevators up to 84" wide and 36" pitch

HANDLING STONE AND GRAVEL

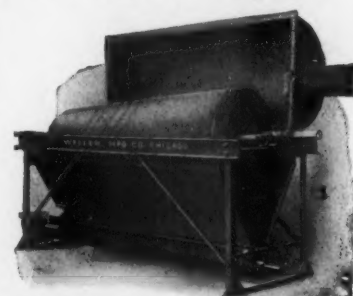
in the most efficient manner—screening, elevating, storing, conveying or transmitting power

WELLER-MADE Equipment

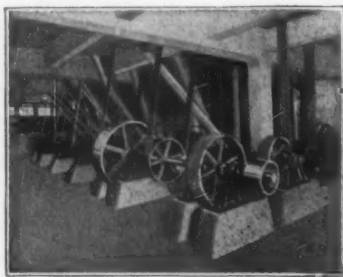
stands the test of time—
more stone and gravel producers
are finding this out every day

Send for catalog

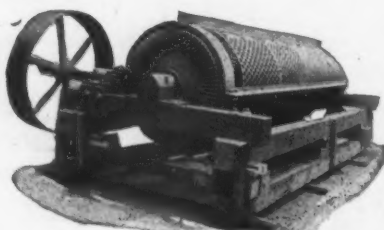
WELLER MFG. CO., CHICAGO



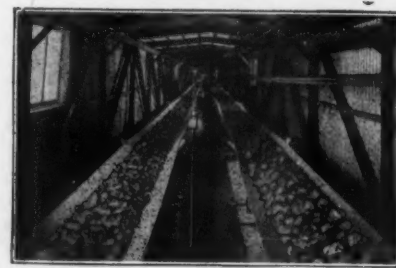
Special enclosed Screens for dusty or fine materials.



Complete Power Transmission Equipments of all kinds.



Revolving Screens of every type for every purpose.



Belt Conveyors for any material, 10 to 60 wide.

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

OSGOOD "18" 3/4-yd. Shovel



Equipped with boom raising and lowering device, digging a 15-ft. sewer trench for Wm. McDowell & Co., Cleveland.

THE OSGOOD CO., Marion, Ohio, U. S. A.

OSGOOD

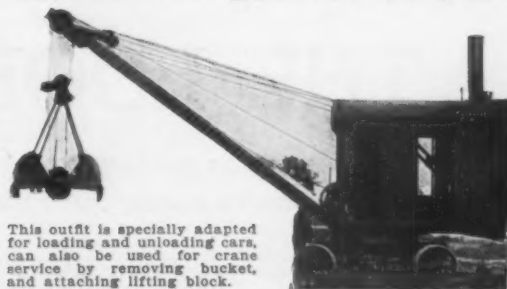
Machinery of Proven Efficiency

will make your job a profitable one

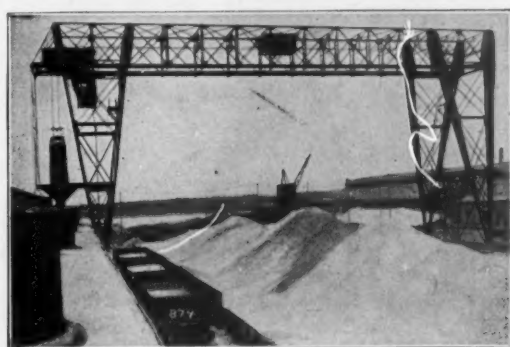
Let us send the details
Steam, Gasoline and Electric
Shovels

Deep Water and Dipper
Dredges

OSGOOD "18" 3/4-yd. 25-ft. Boom Revolving Clam Shell



This outfit is specially adapted for loading and unloading cars, can also be used for crane service by removing bucket, and attaching lifting block.



Sand Handling Gantry Crane equipped with a man trolley, 4-line, two yard Clam Shell Bucket, and rigidly attached hepper to guide the material into the storage reservoirs.

You Can Reduce Your Handling Costs

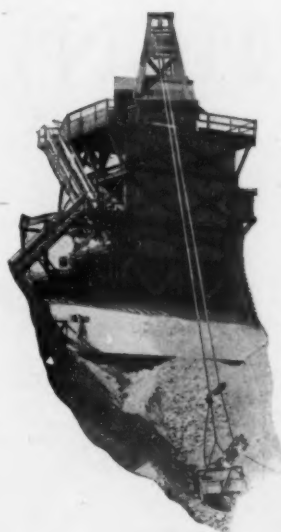
by the use of proper equipment for your work, which should easily and economically handle the material it was designed to take care of. That is why the Edward Ford Plate Glass Company, of Toledo, O., chose a

"McMyler Interstate Gantry Crane"

to take care of unloading sand from cars to stock pile, and then to the mill, as same is needed.

The McMyler Interstate Co. Dept. P-3 Cleveland, Ohio
New York London Chicago

PRODUCTS—Locomotive Cranes, All Type Buckets for every purpose—Elevating and Conveying Machinery, etc.



S. & M. Excavators Delivering Material Direct to Rotary Screening Plants.

You Cannot Make a Mistake in the Shearer & Mayer Outfit

(Statement made by customer using two of our machines)

- ☐ For excavating and conveying sand, gravel, clay and overburden.
- ☐ Delivers direct to screens, cars, wagons, field conveyors or storage piles.
- ☐ Under positive control of one operator it digs, conveys, elevates and automatically dumps the material in one continuous forward operation from digging point to point of discharge.
- ☐ It is adaptable to any design of screening and washing plant.
- ☐ Our knowledge of how best to handle a sand and gravel problem gained through years of experience is at your disposal.
- ☐ Consult us before deciding on your sand and gravel plant.

Write for Catalogue

See our exhibit booths 179-180-181 Chicago Cement Show

SAUERMAN BROTHERS

1140 Monadnock Block, Chicago, Ill.

Mfrs. of Cableway Excavators, Power Scrapers and Cableway Accessories



S. & M. Excavator Delivering Gravel to Crusher and Elevator Belt.

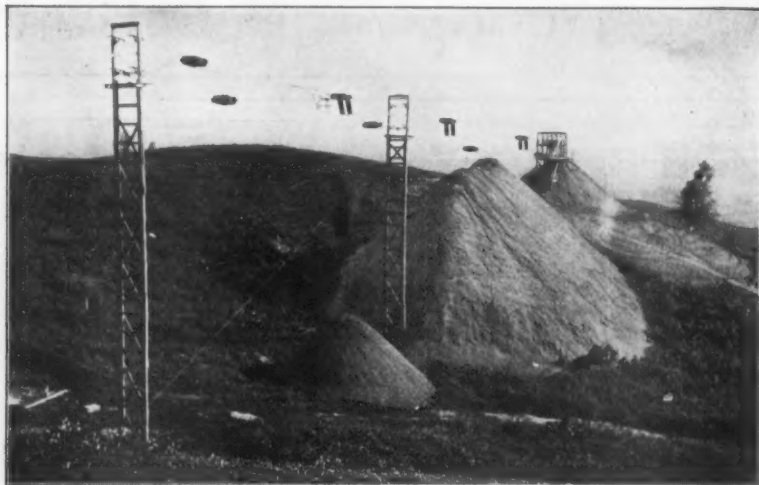


S. & M. Excavator Delivering to Gravity Screening Plant.

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

Distributing Material to Storage Pile or Spoil Bank THE LOOP LINE TRAMWAY

with its continuous procession of barrows may be readily adapted to the distribution of material anywhere along the line by the simple expedient of equipping the barrows with



drop bottoms and the track with a movable tripping device which automatically unlatches the bottoms at any desired point. This is but one of many services to which **Loop Line Tramways** are adapted.

*Let Us Help You with
Your Problem!*

Ambursen Company
61 Broadway New York City



MANY QUARRYMEN

realize the importance of **durability** in the maintenance expense of their equipment

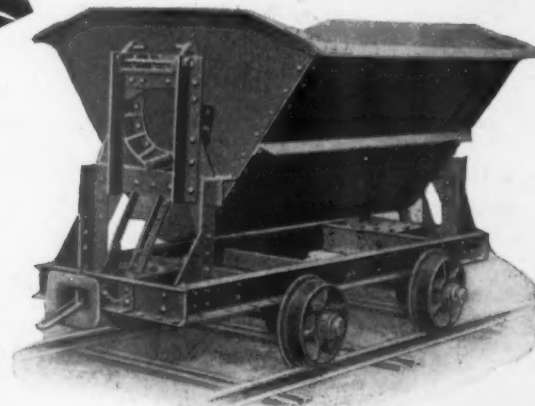
MANY

of them also realize that the eighteen years' experience put into Lakewood Quarry Cars, combined with the most durable materials, make them an asset for economy in any quarry.

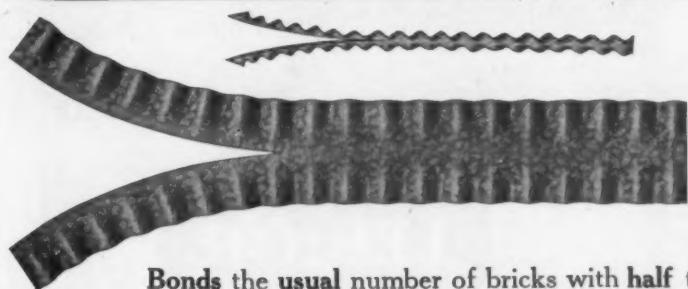
—Manufactured in all sizes and types—
Write for our interesting catalog.

The Lakewood Engineering Company
CLEVELAND, OHIO

New York Philadelphia Baltimore Pittsburgh Chicago Kansas City



Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS



Cost Reducers Are the Lines to Push When Higher Prices Prevail

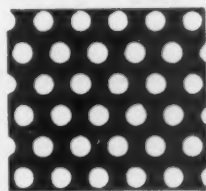
They never scare away a customer, as you can show him a piece of money he can save by using them.

The "Bostwick Y" Wall Tie

Bonds the usual number of bricks with half the usual number of ties—Saves both in tie cost and labor.

Send for Catalog of Cost Reducers

THE BOSTWICK STEEL LATH CO., Niles, Ohio



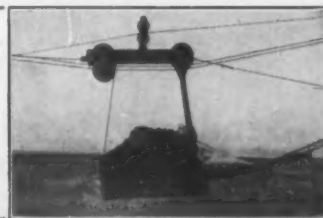
"HENDRICK" PERFORATED STEEL SCREENS AND ELEVATOR BUCKETS

—STAND THE TEST—
Let us figure on your requirements.

HENDRICK MFG. CO.
New York Office, 30 Church St. CARBONDALE, PA.

This Is Our Type "F" Bucket

Write us your condition and requirements and we will advise you if our equipment is adapted to your work.
The Cable Excavator Co.
Commercial Trust Building,
PHILADELPHIA, PENNA.



THE IMPROVED EQUIPMENT CO.

80 Wall Street, New York City

COMBUSTION ENGINEERS

DESIGNERS AND BUILDERS OF

COMPLETE GAS PLANTS
LIME BURNING PLANTS
SPECIAL INDUSTRIAL FURNACES
GAS BENCHES
GAS PRODUCERS



Clyde Hydrator with Hood
"The common sense way"

SIMPLICITY IS THE KEYNOTE OF SUCCESS

IT does not take a "master mind" to install a CLYDE Hydrating plant, nor does it take a "high priced" engineer to run one. If YOU, Mr. Lime Manufacturer, realized how simple it is to obtain a PERFECT HYDRATE, with the CLYDE HYDRATOR you would place your order with us by FIRST MAIL. Write us today—NOW, and let us explain to you what CLYDE PROCESS hydrated lime is and how to obtain the best results, then

Use your own judgment—it's up to you

H. MISCAMPBELL, Duluth, Minn.

Patentee and Sole Manufacturer

DEALER COOPERATION + DEALER COOPERATION + DEALER COOPERATION + DEALER COOPERATION

GORDON COATING



"Sticks Like
A Thistle"

FOR SURFACES of Cement, Stucco, Brick, etc.

Through our years of experience in the paint business, we have developed a coating for surfaces which is unsurpassed.

Gordon Coating is manufactured in white and eight shades.

This is a dealers' proposition. Write to-day for our interesting offer.

GORDON - HITTL CO., 85 Purchase St., BOSTON, MASS.

DEALER COOPERATION + DEALER COOPERATION + DEALER COOPERATION + DEALER COOPERATION

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS



DEALERS WANTED

We want representatives in every city and town in the United States, to handle Medusa Waterproofing, Medusa White Portland Cement and Medusa Water-proofed White Portland Cement.

Write now for catalogs and details of our agency proposition

Sandusky Portland Cement Co.
Cleveland, Ohio

Visit Our Exhibit at
Ninth Chicago Cement Show, Coliseum,
February 12-19, 1916



DIRECT HEAT DRYERS

FOR

**Bank Sand, Glass Sand,
Rock, Clay, Coal, Etc.**

All Mineral, Animal and Vegetable Matter

We have equipped the largest plants in existence and our dryers are operating in all parts of the world. Write for list of installations and catalogue
—S. C.—

American Process Co.
68 William St., NEW YORK CITY



Consider the Trade Mark

It is equivalent to a signature of quality and its fair name is jealously protected by the manufacturer.

The value of any advertising or sales propaganda is made—or broken by the reputation of the trade mark or trade name.

Logically, those firms which feature most their trade mark are most careful in maintaining the quality of their product.

Consider the Trade Mark



CONCRETE FOR PERMANENCE

MILLS:

Ormrod, Pa.; West Coplay, Pa.; Foglesville, Pa.; New Castle, Pa.; Mitchell, Ind.; Mason City, Ia.; Metairie Falls, Wash.

OFFICES:

Allentown, Chicago, Spokane, New York City, Philadelphia, Boston, Minneapolis, Savannah, Des Moines, New Castle, Buffalo, Pittsburgh.

12 Mills—Annual Capacity Over 12,000,000 Barrels

See the Cement Manufacturers' Exhibit
at the Cement Show, Chicago, Feb. 12-19

Rock Products and BUILDING MATERIALS

INCORPORATING DEALERS BUILDING MATERIAL RECORD

Volume XVII.

CHICAGO, JANUARY 22, 1916.

Number 6

PUBLISHED SEMI-MONTHLY.

DEVOTED TO

Quarry Products, Cement, Lime, Plaster, Sand and Gravel, Clay Products and Building Specialties—Fireproof Building and Road Construction.

THE FRANCIS PUBLISHING COMPANY.

EDGAR H. DEFEBAGH, Pres.

Seventh Floor, Ellsworth Bldg., 537 So. Dearborn St., Chicago, Ill., U. S. A.
Telephone: Harrison 8086, 8087 and 8088.

EDITORS:

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GEORGE A. OLSEN, Editor Retailers' Section.

H. F. AKE, Secretary.

DRUSUS H. NICHOLS, Advertising Manager.

Communications on subjects of interest to any branch of the industry are solicited and will be paid for if available.

Every reader is invited to make the office of Rock Products and Building Materials his headquarters while in Chicago.

Editorial and advertising copy should reach this office at least five days preceding publication date.

TERMS OF ANNUAL SUBSCRIPTION.

In the United States and Possessions,\$1.00

In all other Countries in the Postal Union,\$1.50

Subscriptions are payable in advance, and in default of written orders to the contrary, are continued at our option.

Advertising rates furnished on application.

Published on the 7th and 22nd of each month.

Entered as second-class matter July 2nd, 1907, at the Postoffice at Chicago, Illinois, under act of March 3rd, 1879.

Copyright, 1916, by E. H. Defebagh.

Building projects for this spring are said to exceed the records that anybody ever dreamed could be possible.

Very light stocks of building materials are in the warehouses anywhere. The season is sure to start off with a rush.

Improvements in privately owned transportation facilities are far ahead of good roads to make the full benefits available.

Business confidence in all lines of trade, especially in building materials is the saving promise of prosperity in the coming season.

Heavy January rains and thaws are launching unprecedented floods in all parts of the country. Nothing but a big frost can prevent immense damage and suffering.

The dealer in builders' supplies has never been a missionary. It would be much better for him, perhaps, in many cases if he was. To merely hang upon the specifications as they come along is the current and usual thing. But there is a vista open to the man of enterprise and enthusiasm that has a golden rainbow right in the middle.

A concerted general resort to fireproof construction for all types of buildings is the only real remedy for our appalling annual fire loss. Statistics show that the awful total is steadily growing, in spite of all the achievements of science and the horrible lessons of the past. When it really costs no more to design and build the fireproof way, but only needs a readjustment of the building methods, it does seem that means should be found to bring about this much needed reformation. The worst lion in the way is superstition that makes people hark after the old ideas of building. Where can a Samson be found to brave this lion and give mankind the material and moral benefits of safety which science has already completed?

Consistent application of the golden rule would be worth a whole lot amongst our European contemporaries. It also applies to American industries with profit, and without fail.

Storage systems and mechanical hauling equipment to make the rock crushing industry independent of the railroads and bring the business within the pale of modern commercialism are the subjects most important to the ambitious crusher man just now.

Storage and rehandling of crushed rock products when intelligently conducted in connection with the use of the locomotive crane gets over one of the worst features of marketing the output of the crusher. The subject is one worth diligent study right now while equipment and improvement propositions are in order.

In all the good roads conferences there has been too much bluster amongst the people who are already enthusiastic on the subject. It is now high time the direct instructions of the greatest teacher be applied by getting out into the byways and hedges to show those who don't yet realize the need of good roads. Those who live away back from the noise of city conventions do most of the voting on road appropriations. Here is food for thought.

In all the national agitation on the subject of military preparedness let us not forget or overlook the fact that a well designed system of military roads is one of the most important features of strategy. Both guns and ships become obsolete in a year or two, even big fortresses and every other kind of coast defenses get to be useless in a very short time. But the well built road is a permanent military asset that constantly grows in importance and value with the march of progress and invention. Selah.

Why hydrated lime? Six times this question in one month, and from the most astonishing sources at that! The answer is always the same, yesterday, today and forever. Because it is the only safe and intelligent way to buy lime, if the money it costs is to be considered at all. Using hydrated lime, it is impossible for the workman at the building job to destroy the material, so it actually gets used as lime in the work. Not to use hydrated lime means a practical certainty that 75 to 80 per cent. of the lime value will be destroyed in the making and drawing off of the putty at the mortar box. There is no way for the contractor to get the worth of his money in a lime purchase except by buying hydrate. The dealer knows the advantages he gets out of more convenient handling of the commercial package.

Plastering sand, which composes when properly mixed about 80 per cent. of the volume of the material as used, is seldom given very much attention. The cost of a really first-class glass sand, as clean and pure as new fallen snow, is not a very considerable item in any building. If one takes into consideration the difference between a fine job and a very indifferent one, the additional cost shrinks into insignificance. Take a pint bottle, fill it one-quarter full of sand, add enough clean water to bring the level up to the middle of the bottle, and then give it several violent shakes, and let the contents settle. If the water is muddy and the sand separated from the mud on top is less than three-quarters of the solids at the bottom of the bottle, that sand is not fit for plastering, nor for brick-laying mortar. It is pretty good for certain garden purposes, but don't spoil good lime cement or plastic materials of any kind with such stuff. It never will produce a good job.

WITH YOU and ME

The California Tile Contracting Co. has opened show rooms at 5 First street, San Francisco.

George T. Cameron, president and general manager of the Santa Cruz (Cal.) Portland Cement Co., made a visit to Los Angeles recently.

The sales office of the Rapides Gravel Co., Inc., has been removed from Alexandria to Woodworth, La., according to George E. Bent, sales manager.

Harold Hammond, of the firm of William K. Hammond, brick manufacturers and distributors, New York City, has recovered from an attack of la grippe.

The American Enameled Brick and Tile Co. announces the removal of its New York offices to the third floor of the Vanderbilt Concourse building, 52 Vanderbilt avenue, New York.

Arthur E. Daley, who has had several years' experience representing J. B. King & Co. in the state of Pennsylvania, has succeeded the late John H. Holmes as that company's representative with an office at 24 South Seventh street, Philadelphia, Pa.

Ralph H. Coney, one of the officers of the Moores-Coney Co., one of the well-known material concerns of Cincinnati, Ohio, has been appointed a member of the Business Men's Club committee on public highways, on account of his interest in that subject.

The Pittsburgh, Pa., Builders' Exchange elected the following officers for the ensuing year: President, S. P. Trimble; second vice-president, Wilbur Shenk; third vice-president, D. T. Riffe; fourth vice-president, Scott A. White; treasurer, John A. Strouss, and secretary and manager, E. M. Tate.

L. R. Wilson, genial representative of the Lake-wood Engineering Co., Cleveland, Ohio, was a visitor at the office of ROCK PRODUCTS AND BUILDING MATERIALS shortly before press day. Mr. Wilson was in Chicago attending a convention and reports business in the "Built to Last" line brisk.

The Cleveland Material Co., Cleveland, Ohio, has a seasonable souvenir in the shape of a steel tape Lufkin rule a yard long, which is a very convenient pocket tool for contractors and engineers. Like everything this company has to offer, it is the best obtainable and just right for the purpose.

New Year's greetings reached our sanctum recently from Captain George M. Thompson, of the Fifty-second Canadians, from London, which indicates that our friend, so well known to the cement trade as the American representative of the Canadian Pebble Co., is supporting the fighting line "somewhere in France."

The baby calendar sent out by the Clinchfield Portland Cement Corporation has made a hit with all the ladies, and incidentally all the fellows who are popular with the ladies. The larger calendar, which pictorially represented the manufacture of Portland cement and the great Clinchfield mills at Kingsport, Tenn., is a very practical commercial calendar as well as an office beautifier.

John B. Rose, president of the Greater New York Brick Co., New York City, was incapacitated by an infection of the ear during the first part of the month. For a time it seemed as though it would have to be operated upon, but this was avoided and the former State Senator is now in good health.

The Chattanooga Builders' Exchange recently met and elected officers for the ensuing year. The officers are: President, F. B. Sloan; vice-president, A. F. Hahn, both re-elected, and five new members elected on the directorate. The present board is composed of M. K. Wilson, John G. Pope, F. J. Howard, D. H. Wood, W. E. Love, R. L. Westcott,

Charles M. Willingham, W. S. Holmes, F. H. Cantrell and Gus A. Wood. The five retiring directors are J. M. Allen, John D. Key, J. W. Tyler, W. P. McBroom and J. A. Stein. According to reports submitted by the various committees, the organization is in a flourishing condition. The exchange voted to send about ten delegates to the annual convention of the National Association to be held in Baltimore, Feb. 22 to 24. The committeemen have not been named as yet.

The Canadian Commission of Conservation has been studying the extent of fire losses in Canada, and in this connection has secured data with regard to uniform building by-laws, wherever such are in force, with a view to establishing a uniform by-law for villages, towns and cities. W. Pearse, city architect, Toronto, has suggested a central bureau where municipalities could secure information with relation to the fire-resisting qualities and strengths of various materials used in building construction.

A. L. Banning, Jr., has been elected secretary of the Memphis Builders' Exchange to succeed N. M. Crawford, who resigned nearly a year ago, and whose duties in the meantime were handled by Miss Annie Laurie Berton, assistant secretary. Officers of the association have planned an extensive program for the winter months.

M. H. Newman, representative of the Master Builders, of Cleveland, Ohio, was a recent visitor in Nashville, Tenn., where he called on a large number of friends. Mr. Newman secured an order for waterproofing for the N. C. & St. L. Railway's new station at Lebanon, Tenn., including 15,000 square feet.

William E. Jordan, president of the Nashville Builders' Supply Co., Nashville, Tenn., has gone to Florida, where he will spend several months amid orange groves and sunny climes. With characteristic acumen, Mr. Jordan left Nashville about twelve hours before a severe drop in temperature and a snowstorm arrived. Mr. Jordan will remain in Florida for several months.

Twenty or more members of the Pittsburgh (Pa.), Builders' Exchange are arranging to attend the third annual convention of the National Association of Builders' Exchanges at Baltimore, Md., Feb. 22, 23 and 24. Secretary E. M. Tate, of the Pittsburgh Exchange, will be chairman of the conference of national secretaries. The Pittsburgh Exchange now ranks as one of the four biggest builders' organizations in this country.

A business meeting of the stockholders of the Contractors' and Dealers' Exchange, of New Orleans, La., was held in that city on Dec. 27, and reports from the various departments and committees showed very satisfactory results for 1915. After the usual routine matters had been discussed a number of committees were appointed to serve during 1916. On the various committees appear the names of the prominent dealers of the city.

The E. I. DuPont de Nemours Powder Co. presents its customers this season with French briar pipes made in the shape of black powder kegs. When you put the tobacco in the bowl of the pipe and touch a match to it, you are supposed to have a quiver run through your system, which is to re-

Scheduled Shows and Meetings.

Feb. 2-3, 1916—National Lime Manufacturers' Association, annual meeting, Hotel Statler, Cleveland, Ohio.

Feb. 3-4—Iowa State Clay Products Manufacturers' Association, annual meeting, Iowa State College, Ames, Iowa.

Feb. 8-9, 1916—Chamber of Commerce of the United States, annual meeting, Washington, D. C.

Feb. 8-10—Illinois Clay Products Association, annual meeting, Hotel Jefferson, Peoria, Ill.

Feb. 12-19, 1916—Ninth Chicago Cement Show, Coliseum and Armory, Chicago, Ill.

Feb. 14-17, 1916—American Concrete Institute, annual convention, Auditorium hotel, Chicago.

Feb. 15-16, 1916—Ohio Builders' Supply Association, annual convention, Cleveland, Ohio.

Feb. 15-17, 1916—Illinois Lumber and Builders' Supply Dealers' Association, annual meeting, Sherman hotel, Chicago.

Feb. 15-18, 1916—Second National Conference on Concrete Road Building, Auditorium hotel, Chicago, Ill.

Feb. 16-26, 1916—Complete Building Show, Coliseum, Cleveland, Ohio.

Feb. 17-19, 1916—National Builders' Supply Association, annual convention, Statler Hotel, Cleveland, Ohio.

Feb. 18-19—West Virginia Lumber and Builders' Supply Association, annual meeting, Hotel Windsor, Wheeling, W. Va.

Feb. 20-26, 1916—National Brick Manufacturers' Association, annual convention, Statler Hotel, Cleveland, Ohio.

Feb. 21-22—National Paving Brick Manufacturers' Association, Hotel Statler, Cleveland, Ohio.

Feb. 24, 1916—New England Builders' Supply Association, New American House, Boston, Mass.

Feb. 29, 1916—Central Iowa Retail Lumbermen's Association, annual meeting, Waterloo, Ia.

Feb. 29-March 4, 1916—Mid-West Cement Show, tenth annual, Omaha, Neb.

March 9, 1916—Building Material Dealers' Association of Eastern Pennsylvania, annual meeting, Hotel Walton, Philadelphia, Pa.

March 22-23, 1916—New York State Builders' Supply Association, annual convention. Onondaga Hotel, Syracuse, N. Y.

mind you that it is not the thing to do with the full sized steel package. The pipe is labeled "explosives," so as to give the requisite warning, for the DuPont company are famous advocates of the principle of "safety first," and everything they make and sell bears this slogan.

W. A. C. Miller, president of the W. A. C. Miller Lumber Co., was elected president of the Builders' & Traders' Exchange, of Detroit, Mich., early this month, succeeding John A. Mercier. Otto Misch was elected vice-president and T. E. Beck treasurer. Mr. Miller is widely known in building circles and is an active member of the Board of Commerce, D. A. C. and other organizations. Mr. Misch is a building contractor, and Mr. Beck is vice-president and treasurer of the Detroit Mantle & Tile Co.

The building committee of the Commercial Club of Nashville, Tenn., issued a statement in connection with its plans for the building of its new home, as follows: "In addition to employing a Nashville architect, Mr. Russell E. Hart, the Commercial Club decided that all the material used in the building and all work done on the building should be purchased in Nashville and done by Nashville firms."

The public meetings at the house of the American Society of Civil Engineers, 201 Fifty-seventh street, New York City, under the auspices of the special committee on the materials for road construction, have been held just as we go to press. The meetings were for the purpose of discussing a report containing conclusions relative to the uses of sand, gravel, broken stone, slag, brick, stone block, cement concrete and wood block in the construction of highways. A large number of engineers, contractors and producers of non-bituminous highway materials attended and participated in the discussions.

Geo. C. Eccles, representative of the Sandusky Portland Cement Co., Sandusky, Ohio, is one of the busiest men in the industry at present. Among Mr. Eccles' activities may be mentioned attendance at the Southern Illinois Retail Dealers' Association at Carbondale, Ill., and from there he will go to the Retail Lumber Dealers' Association of Indiana, at Indianapolis. From there he will attend the Wisconsin Retail Lumber Dealers' Association at Milwaukee, and then back to Chicago to be present at the Illinois Lumber and Builders' Supply Dealers' Association meeting.

Paul A. Jandernal, one of the best known patriachs in the selling of Portland cement, altho he is still a young man, because he started very early, has become sales manager of the Kosmos Portland Cement Co., with headquarters at Louisville, Ky. For more than fifteen years he has been prominently connected with the sales forces of the biggest American cement concerns, and so identified with the remarkable growth of the industry. C. M. Timmons will specialize on contract work and become contract sales manager, and E. M. Clancy will be assistant sales manager. "Jandy" is a live wire by long established reputation and sure to inject enthusiasm into the new organization.

Lloyd Brown, who has been handling the "Lakewood" line at Baltimore, has also opened offices for the company in the Real Estate Trust building, Philadelphia, and will take care of the trade in New Jersey, Eastern Pennsylvania, Maryland, Virginia and the District of Columbia, for the entire line of contractors' equipment, concrete mixers, industrial railways and factory, mine and quarry cars and trucks of all kinds. The Lakewood Engineering Co. now maintains its own offices in New York, Philadelphia, Baltimore, Pittsburgh, Chicago and Kansas City. Its factory is located at Cleveland, where it manufactures in its own shops the entire line of product put out by it.

The fourth annual meeting of the Chamber of Commerce of the United States will be held at the New Willard Hotel, Washington, D. C., Feb. 8-10. John H. Fahey, president of the National Chamber, has announced that President Wilson will be the principal speaker at one of the sessions of the convention, probably at the banquet on Thursday, Feb. 10. Mr. Fahey predicts the most successful gathering in the history of the organization.

M. G. Bennett, general manager of Samuel Cabot, Inc., Boston, Mass., was a Chicago visitor on Jan. 18. E. A. Foster of the same concern left Boston for Florida on Jan. 15, where he will winter until just before the N. B. S. A. convention at Cleveland. He will then journey to New Orleans and, in company of John Voelkel, go to Memphis, pick up W. W. Fischer and leave for Cleveland, via Chicago.

The Association of American Portland Cement Manufacturers will remove its headquarters from Philadelphia, where it has been maintained about fifteen years, to Chicago, taking for this purpose 6,000 square feet of space in the Conway building, Clark and Washington streets.

It has developed in the political and economical discussions that take place in Washington as a regular diet that William E. Carson, of Riverton, Va., our friend and companion, and famous to all our readers as the president of the National Lime Manufacturers' Association has got to be credited with the original suggestion, as well as the development of the idea which led up to the establishment of the regional banks, and made possible the reorganization of our national banking system. The solution of the problem that the bankers and financiers have stumbled over for two decades or more came out of the splendid constructive imagination of a business man who knew what business wanted, and the clear views of the mountain chieftain of Virginia were adopted exactly as he worked out the plan.

The annual election of the Pittsburgh (Pa.) Builders' Exchange, held on Jan. 5, resulted in the election of the following directors: R. K. Cochrane, G. H. Danforth, George N. Glass, G. T. Heppinstall, H. L. Kreusler, H. F. McNoght, James W. Melville, Arthur F. Mentz, John L. Richmond, D. T. Riffle, Wilbur Shenk, John A. Strauss, S. P. Trimble, Joseph A. Weldon and Scott A. White. The executive officers for the ensuing year have not yet been announced, but it is a pretty safe bet that this bunch of live wires are not going to make any mistake. General Manager E. M. Tate, under his chosen motto, "Quality, Not Quantity," and slogan, "Absolutely Correct Report," has worked up just about the squarest co-operative local body that this country can boast of. It is one of the active organizations that is doing things to help the members to do pleasant business, which is the only kind worth while.

The annual convention of the Retail Lumber Dealers' Association of Pennsylvania will be held at the Fort Pitt Hotel, Pittsburgh, Pa., Feb. 9 and 10. Elaborate preparations are being made to entertain what is expected to be the biggest crowd of retailers ever gathered in Pennsylvania. On the last night of the convention there will be a joint good time furnished by the Pittsburgh Wholesale Lumber Dealers' Association and the retailers. The usual annual banquet of the retailers will be held in the early evening and will be an elaborate affair. Following this the wholesalers will put on a program of stunts which are calculated to take away any indigestion which the retailers may have accumulated at the banquet. For the wholesalers John P. Garling, of the Garling & Splane Lumber Co.; Edward S. Dunn, of the Allegheny Lumber Co., and John B. Montgomery, of the American Lumber & Manufacturing Co., will have charge of the stunts.

The Hammer Lumber Co., of Prentice, Wis., is erecting a large lumber shed, which will house lumber, building material, plaster, cement and coal.

John J. Maroney, known to fame as the greatest of all brickyard doctors, especially as to where they burn 'em, is a combustion expert and has just sent out a picture of his real self at work in connection with the United States Rocking Grate Bar Co., of Chicago. It's a lecture on combustion that is instructive and useful, by one who knows.

REPORT OF BUREAU OF STANDARDS.

The annual report of the director of the Bureau of Standards, Department of Commerce, Washington, D. C., gives an interesting account of the activities of that bureau during the fiscal year 1915. The standards with which the bureau has to deal are standards of measurement, standard values of constants, standards of quality, standards of mechanical performance and standards of practice. The relation of the bureau's work to the public is clearly discussed, especially the bureau's part in aiding industrial progress. During the year 154,000 tests were made and 1,800,000 lamps inspected at the factories. Of popular interest to manufacturers and testing laboratories are the bureau's investigations of industrial materials, such as metals, clay products, glass, cement, textiles, papers, rubber, and paints. The bureau issued forty-seven new publications during the year, making a total of about 400 scientific and technical papers, circulars and miscellaneous publications issued to date.

STUDY AND WORK OF E. S. LARNED.

Answering several inquiries at once our records show that it is due to the study and work of E. S. Larned, eminent engineer of Boston, Mass., that the thorough investigation testing and method of testing of sand to be used in concrete mixtures has been brought to its present state of intelligence. More than ten years ago, in connection with the work of the Concrete Institute, Mr. Larned took the lead in all discussions in the matter of concrete aggregate, and especially in connection with the matter of sand and the importance of the integrity of the same in concrete mixtures. This same connection opened into the standardization of specifications for the manufacture of concrete blocks, which is still and always will be an important branch of the concrete industry.

Although Mr. Larned is well known to many of our readers on account of his long identification with the sales department of Portland cement in the New England district, from the Boston center particularly, it may be proper to recite that at the time Mr. Larned undertook the investigation and testing of sand he was perhaps the best qualified man in the country to do so. He was a trained engineer familiar with all forms of masonry construction, having had experience with the New York board of water supply and subway construction, and with the Metropolitan water board of Boston, constructing concrete aqueducts and other important municipal work, and broadly familiar with the progress of the times through his membership in the Boston Society of Civil Engineers, the American Society for Testing Materials, and is one of the prominent founders of the American Concrete Institute.

Mr. Larned's eminence in the industry has been recognized by all of these technical societies in the papers that he has presented, and in lectures delivered before Harvard college and the Boston Society of Civil Engineers. His wide acquaintance and broad experience in many different kinds and types of construction has accumulated a very extensive personal following amongst contractors, architects, dealers and engineers, particularly throughout New England, where he has so long labored as a central motive power for the promotion of the best practical achievements in concrete.

The RETAILER

United Effort Increases Fireproof Construction

What can be accomplished in an attempt to encourage building and at the same time improve the type of construction materials used has been demonstrated in the city of Milwaukee, Wis., during 1915. Through the co-operation of the public press and the city administration, a material increase in the amount of construction over the previous year was achieved. Through these same channels and the strict enforcement of the building laws, safer construction prevailed and the use of fireproof materials was greatly augmented. In an interesting summary of conditions in the Milwaukee building field during the year, Building Inspector W. D. Harper calls attention to the rapid increase in the erection of these fireproof buildings. Mr. Harper says:

At no time in the history of our city has the total cost of building operations for any one year been of a more gratifying or surprising figure than is shown by the expenditures for buildings and improvements during 1915. This exceptionally fine record serves to confirm the prediction of increased activities made a year ago, and also, is a convincing and substantial tribute to the value of the public press in its efforts to promote and foster a sentiment which has materially aided the return of normal conditions, and the confidence necessary to material prosperity. It also furnishes abundant proof of the courage, faith and enterprise of citizens, and implies the compliment of an unbounded confidence and appreciation of the efforts and purposes of the city administration in the prosecution of large undertakings and improvements, vital to the interests and welfare of the city and demonstrates the fact that through this agency Milwaukee has become an inviting and vigorous field for safe and permanent business enterprises and investments for both commercial and residential purposes. These are some of the factors, which collectively have contributed to make possible a successful building season, in which creative faculties and the skilled working forces of labor have cooperated and been employed in carrying out ideals in building construction and improvements, which has added such an appreciable gain to the wealth, comfort and prestige of our city.

Serve Double Purpose.

Predominating features in building construction in the fire limits, and in the erection of apartment buildings in the residence portions of the city are illustrations of the value and economy of strictly fireproof structures. In the congested portions, many new buildings of this class are being erected, and by reason of their fireproof or fire-resisting qualities, they serve to perform a double purpose for safety from fire, inasmuch as they, while comparatively safe within themselves, also act as a fire stop by resisting the spread of fire, and confining same to a much smaller area. The same benefits are designed to result in our so-called business districts, so that each building now erected in the fire limits and in the business districts represents just so much less danger from the hazard of fire, and while it is true that we are making rapid progress in the erection of a class of buildings which must be considered as combining all the essential qualities of modern construction, we are not neglecting the safety of a large class of buildings which by reason of their inferior fire-resisting qualities must be considered as being more or less hazardous according to the purpose for which they are used, consequently, it has been necessary, in many cases, to recommend additional stairways, fire escapes, the remodeling of electric wiring and lighting systems, and other requirements for safety.

Of the various inspection divisions of this department, the inspection of electric wiring and lighting is proving to be of great value for fire prevention, inasmuch as all work in connection with the installation and remodeling of all wiring and lighting systems is now done by regular licensed contractors, subject to the inspection and approval of this department.

Police Ad Department.

In connection with the work of this department invaluable service is rendered by the police department of our city, through which channels the various notices are properly served and returns on same delivered daily to this department; also, all violations of such ordinances as come under the jurisdiction of this department are promptly reported through the same agency. Our records show that approximately 10,000 notices, letters and communications have been served or delivered through the medium of the police department during the year 1915.

The outlook for building operations and improvements for the coming season have never been so bright and

promising as at the present time. From present knowledge of prospective building enterprises, which beyond question will be prosecuted to completion during the coming year, I confidently predict that we shall exceed the highest mark in the expenditures for building construction that has ever been recorded in the history of this department, and that in view of the figures at hand it can safely be predicted that the total cost for 1916 will run up close to \$17,000,000.

Record for Year.

Buildings erected during 1915 follow:			
Dwellings	451		
Duplex flats	462		
Apartment houses—			
Number	38		
Apartments	474		
Store buildings—			
Number	100		
Stores	145		
Apartments	147		
Garages	775		
Office buildings	24		
Manufacturing buildings	37		
Warehouses	15		
Churches	7		
Theaters and halls	15		
Schools and colleges	14		
Stables	41		
Sheds	344		
Additions and alterations	1,606		
Municipal buildings	5		
Total	4,741		
Fireproof construction	240	\$ 3,695,884	
Mill construction	3	194,000	
Ordinary construction	324	2,176,782	
Veneer and frame	1,709	3,877,553	
Additions and alterations	1,590	1,523,383	
Totals	3,866	\$11,467,602	
No. Cost.			
January	78	\$ 218,874	
February	123	330,783	
March	420	899,742	
April	602	1,115,750	
May	467	1,125,395	
June	402	763,029	
July	324	844,967	
August	325	1,073,209	
September	329	2,815,500	
October	367	637,936	
November	278	1,040,357	
December	166	760,467	
Totals	3,881	\$12,311,397	

W. W. Fischer After Arkansas Business.

A deal of wide concern to the construction and building trade of the south central states was consummated when the Fischer Lime & Cement Co., of Memphis, Tenn., made Little Rock, Ark., a distributing point for territory east of the Mississippi river for its line of building products, and took over the sales in Arkansas, Louisiana, Mississippi and Tennessee of the Cape Girardeau (Mo.) Portland Cement Co.

One year ago, Jan. 1, the Fischer Lime & Cement Co. took over the sales department of the Phillips Carey Roofing Co., Little Rock branch, including the roofing, asbestos and magnesia departments and the further expansion of the Fischer Co.'s plans came Jan. 1, 1916.

C. R. Brown, who was for a long time manager of the Carey Co.'s Little Rock branch, and who has been manager of the Fischer Co.'s branch for the past year, remains in charge of the roofing, pipe-covering, asbestos and magnesia departments.

Charles S. Smith, who has been identified with the Fischer Lime & Cement Co. in Memphis for a number of years, will be manager of the building material department of the business in Little Rock.

W. S. Sitlington, traveling representative of the Cape Girardeau Portland Cement Co., goes with the Fischer Lime & Cement Co., with headquarters at Little Rock, to handle cement sales in Arkansas and Louisiana.

The Memphis house will continue to handle sales in Tennessee, southern Kentucky and Mississippi.

The concern has acquired the commodious structure at the foot of East Second street, formerly used as a freight depot by the Rock Island railroad, and has therefore ample storage and business quarters. The chief lines to be handled are cement, mortar color, plaster, metal lath, corner bead, wall ties, wall coping, water-proofing, roofing, slate surface shingles, stains and pipe covering.

"We intend," said W. W. Fischer, "to make the Little Rock branch largely a jobbing house and have ample facilities of carrying a large stock. The territory east of the Mississippi including Arkansas and Louisiana, looks good to us and we are anticipating one of the best years for business, generally, and for the Fischer Lime & Cement Co., in particular, that we have ever experienced."

LOOK OUT FOR THIS PARTY.

There is a "slick" individual who called himself C. H. Graham, when he showed up in Memphis, and who became O. W. Baker, when he arrived at Houston, who has slipped the juice of his blarney to several of the most prominent southern dealers in builders' supplies to the tune of twenty-five dollars per injection. Once upon a time this individual was a plastering contractor at Chattanooga, or he is supposed to be the same person whose method is to show his familiarity with the plastering contracting business, insinuating his intention of doing extensive business in the locality as the representative of well known plastering concerns far away. He shows his card, negotiates a check and as soon as he has the money disappears. The checks come back from the bank marked "no account here," or words to that effect, and the memento remains in the hands of the accommodating dealer whose kindness has been imposed upon. Now, of course, there is no limit to the combination of names that he may assume, but it is just as well to be on the lookout for this smooth gentleman and make certain of the identification and connection before the check is cashed. It is not often that anything of this kind crops up in the building material industry and it ought not to be a very hard proposition to catch this fellow dead-to-rights and thereby stop his depredations. It will not cost much to send a wire to the bank on which the check is drawn, and so verify the "phony" transaction in its incipency.

TO MEET AT HOTEL WALTON, PHILADELPHIA.

Hotel Walton has been decided upon as the place for holding the annual meeting of the Building Material Dealers' Association of Eastern Pennsylvania on March 9. Philadelphia had been previously selected as the city in which to hold the convention, due to the fact that a good attendance and lively interest featured the special meeting held in that city by the association last May. President George F. Erich, of Allentown, and Secretary Charles H. Cox, of Phoenixville, are thoroughly convinced that a good attendance will respond to the excellently prepared program.

Twin City Exchange in Annual Dinner

The Twin City Builders' Material Exchange held their second annual dinner in the Windsor room of the St. Paul hotel, St. Paul, Minn., on the evening of Jan. 18. On this occasion all of the supply dealers in Minneapolis and St. Paul were the hosts of the sales managers and salesmen of the building material interests regularly represented in the Twin City markets. It goes without saying that this was a very enjoyable and altogether profitable session of good fellowship, and it is unnecessary to go into detail with regard to the benefits which attach to such co-operative meetings of the elements that make up the chain of connection between the production and delivery of building materials. The level headed conservatism of the Twin City fraternities has won the hearty support and confidence of the community in a way that is worthy of imitation elsewhere.

Right is right and wrong never did anybody any good. Fighting is wrong—so if we are going to be right we are not going to fight. We all want to call our competitor our friend.

Which is the greatest city in the state today,
The only city around here, up and on the way;
That is entertaining a lot of men of cement and plaster fame,

Who come up here and claim to know it all—
No other than the wonderful, aggressive old "St. Paul."

Who are the entertainers that are doing all of this,
Twin City Building Material Exchange, if I am not amiss.

A crowd of men working together like the bee,
Keeping prices regular for manufacturers' glee.

Billy Stewart is the president of this dandy crowd,
And as the boys they gather round, it surely does him proud.

McConnell of the Atlas crowd and Pilcher H. & M.,
Bud Raeder backing Lehigh now, being helped by Hendy Black;

J. C. U. McDaniels selling Chicago Double A,
And I. J. Sweitzer on the job keeps mills going night and day.

Marquette mill down in La Salle,
With three men in the traces,
Keep their cement right in the line
And sometimes win the races.

Our late friend Gold Williams taught one of them,
McDonald is his name, while A. J. Whipple
Learned from Atlas how to play the game.
And Nic Duncan, good old Nic, he keeps them all aflame.

In Mason City, Iowa, Northwestern States is found,
And Homer Hasbrouck, genial Has, with Todd Sloan
on the board,

Makes J. Van Doran and all his boys push Universal hard.
F. C. Printy, hardly known up in this neck of woods,
Lets his man Stewart, good old pal,
Make Medusa waterproofing, and their cement good.

What is the other line that helps our coffers fill?
It is the plaster made from gyp, and ground up in a mill.

All from Fort Dodge, in Iowa, they have to send it in,
And now below I'll tell you of its bunch of greatest men:

First of all there's old Tom Breen,
They say he's awfully careful,
But when he's out to sell his plaster,
Old Cardiff brand's the master.
But Plymouth, it is on the job,
By force of Osterlund and Ewing.
So U. S. G., with Price and Murray,
Will find there's something doing.
Not last of all, but in the game
With dear old Roy Merrill,
And Herman Olson as his pal,
Keeps American sure a peril
To all the others that I said
Are making Gypsum products.

But last of all I mention one,
A terror to them all—
It's Wasem that I want to say
Makes prices rise or fall,
So here's to Blockson, Diamond H.
Who's ever round and listening.
Let those beware who try to fool
His hustling, busy selling.

Of other guests we have a few
From out Mankato way,
Who like to come and see us all
And pass the time of day.
Without much competition
They do not have a fear.
So when they buy, they only have
To furnish good old beer.
Ben Fay and Harry Carney
Are the ones we have in mind;
Brick laying cement is their play
With lime, sometimes we find.

Now of the ones that all this fuss
Is made up for, you see,
I'm going to try and tell you of
So you will know like me.
We cannot make our money buying,
As we used to do.
We have to sell and make it,
That we find is true.

Old L. M. C. & Company,
With Norblom at the helm,
Directs the way the game to play
In our sister City Minn.

With Christenson, good Andy
And Bicknell's sound advice,
They skip around and fool them all,
Just like a lot of mice.

But Perry Speakes and brother Carl
Slip in one now and then.
And when they don't, Mill City crowd
Is found around the bend.
For Magnuson and Meyers now
Are bound to make all hustle,
Then Westerlund and Westerberg,
They get in the tussle.

Out in the Midway, where business booms
Among the flats and houses,
There is a firm, the head of which
Works all his men and horses—

Ivan Ringstad stands alone,
And cares not for the others,
For the Midway lime is all his own,
And his goods he gets from others.

While Northland Pine, with Gregg ahead,
And Spaulding, Dale and Kayser,
Help to make that firm alone
Looked to as real advisers.

We nearly did forget a man—
He keeps us all a guessing—
If E. H. Cobb will play with us,
We'll all give him a blessing.

For Pollock, from out Kansas way,
Who sells Ash Grove cement so fine,
Says they are in the game to stay,
With Sam Hewson keeping them in line.

Here in St. Paul, it's not all fine,
But getting better all the time.
Bill Center, down below the hill,
Keeps Pearce in boiling water,
And P. J. Ryan, with his pard across the Mississippi,
Keeps everyone of us alert, to see they never falter.

The rest of us are working in
A venture new and shining.
John Wharry and John Doherty,
Hooked up with Stewart, planning,
With Pearce's Company and F. J. Morse,
To give them all a tanning.

ROCK PRODUCTS here and on the job
To tell it all to others,
So now you see how happy we,
Just like a lot of brothers.

Ohio Supply Men's Annual.

The Ohio Builders' Supply Association will convene at the Hotel Statler, Cleveland, Ohio, Feb. 15 and 16. This is the eleventh annual meeting and all arrangements have been completed to make this one of the most successful gatherings in the history of the organization. At 10 a. m. on Feb. 15 there will be an executive meeting, and at 2 p. m. there will be a welcome address by Harry L. Davis, mayor of Cleveland, which will be responded to by President W. A. Fay. This will be followed by a talk on "Enthusiasm in Business" by George Schneider, secretary of the Cleveland Athletic Club.

At 2 p. m. on Feb. 16, there will be a paper on "Cost Systems," by Clay Herrick, manager of the research department, Ernst & Ernst, public accountants, followed by general discussions among the members, as well as papers and discussions on "Credit Association and Their Value to Local Organizations." On the evening of Feb. 17, there will be a joint banquet with the National Builders' Supply Association at Hotel Statler, at which time there will be an entertainment, including the Reserve College Glee Club, 40 men, music and a general good time.

In a circular sent out from the association's headquarters at 409 Johnston building, Cincinnati, Ohio,

and signed by President W. A. Fay and Secretary Frank H. Kinney, the following timely paragraphs appear: "We expect every building supply dealer, whether a member of our association or not, to be present at this time, to meet the representatives of the different manufacturers, to meet his fellow members, to discuss problems that affect each of the different dealers and their different localities, to help promote the interest of our association and by so doing promoting the interest of every building supply dealer in the state, and we have every reason to believe that there will be a large attendance at that time. Kindly make reservations through the secretary, or by writing direct to Hotel Statler."

ILLINOIS CONTRACTORS' MEETING.

The ninth annual meeting of the Illinois Association of Municipal Contractors was held at the Hotel La Salle, Chicago, Jan. 20, with an attendance of eighty-eight. Neat programs were supplied, bearing the slogan, "Make this a Good Road Land."

After the regular routine business had been disposed of, the election of officers for 1916 took place, and resulted as follows:

President, P. R. Fletcher, Blue Island.
First vice-president, T. W. Keys, La Salle.
Second vice-president, A. J. Parrish, Paris.
Third vice-president, Everett Prosser, Cairo.
Fourth vice-president, A. D. Thompson, Peoria.
Secretary and treasurer, Jos. A. Gund, Freeport.
Executive secretary, C. E. Mateer, 505 Strauss building, Chicago.

The annual banquet was held in the East Room of the hotel on Jan. 20 at 6:30 p. m., and after the members and guests had done justice to the good things provided, Mr. Woodruff, mayor of Peoria, delivered an interesting address on general topics of the day for the benefit of the contractors. He was followed by W. T. Blackburn, of Paris, who spoke on the subject of "Monolithic Brick Pavement," discussing at some length the monolithic pavement being built at Paris, Ill., at the present time. The proceedings closed with a talk on promotion work by John Faulkner, Chicago representative of the Ohio Sandstone Co.

KENTUCKY BUILDERS' EXCHANGES.

Ticket B made a clean sweep in the annual election of ten directors of the Louisville Builders' Exchange, held recently, in Louisville, Ky., at Exchange headquarters in the Realty building. Four of the retiring directors were re-elected, and with the six new directors, will serve for two years with the holdover directors. The successful candidates were installed at the regular annual meeting held on Jan. 21. The board of directors will meet on Feb. 3, at which time officers will be elected to serve during the year. The directors elected, with the branches of the building trade which they represent, are: Alfred Struck, general contractor, re-elected; W. Hardwick, structural iron, re-elected; T. B. Duncan, Jr., wallpaper, re-elected; W. Bittner, store fixtures, re-elected; T. M. Wintersmith, cement; B. J. Campbell, wall plaster; R. Hanson, material; William Dehler, hardware; J. E. Hegan, tile; and A. J. Oligschlager, excavating and engineering.

The Paducah, Ky., Builders' Association has been organized with twenty-two members, representing building supply men and contractors. Officers have been elected for one year, and a committee named to draft the by-laws and constitution of the organization. The by-laws committee will confer with the secretary of the National Builders' Association, who will be present this month, regarding affiliation with the national organization. Officers elected were: John Maret, president; G. R. Davis, vice-president; W. Guy Lockwood, secretary; Jack Cole, treasurer. The by-laws committee is composed of Jack Cole, Ed Hannan; C. E. Pepper, Gus Lockwood and Arthur Murray.

Nebraska Dealers in Big Convention

The annual meeting of the Nebraska Lumber Dealers' Association, which included in its attendance practically every building material dealer in the state, recorded among its members and visitors 700 men and women during the three-day meeting. In addition to the retail dealers there were in evidence builders' supply dealers and jobbers who as a rule represent throughout Nebraska the various concerns with which they do business.

The first day's session was held on Wednesday, Jan. 19. Registering began early in the morning and was very brisk throughout the day, 500 names being placed on the cards.

The first session of the convention was called to order shortly after two o'clock by President F. A. Good, of Cowles, and was well attended. Mayor C. W. Bryan, surrendered the city of Lincoln to the delegates in his address of welcome. The president responded and then delivered his annual address, which was followed by reports from Secretary E. E. Hall, of Lincoln, and Treasurer E. S. Clarke, of York.

Among the committees appointed at the first session were the following: Auditing—C. E. Malone, Lincoln; E. L. Brown, Chester; F. S. Davey, Malcolm; resolutions: W. S. Swanson, Oakland; T. B. Hunsaker, Stromsburg; F. C. Krotter, Palisade; nominations: J. C. Newcomb, Friend; R. M. Trumbull, Hildreth; R. R. Philpot, Humboldt.

D. V. Dierks, of Kansas City, representing the Southern Pine Association, spoke in behalf of the lumber which that organization is exploiting, and asked for the cooperation of retailers.

At this stage of the program the Nebraska Lumbermen's Mutual Association went into convention with President G. W. Eggleston, of Bennett, in the chair. The secretary's report showed that this department of the retailers' association was in a healthy condition. After a few more reports and the appointing of a few committees the session adjourned to meet the following day.

Nebraska Material Co. Entertains.

On Wednesday evening, an exceptionally well selected and prepared dinner and an elaborate cabaret show was tendered about 300 dealers in the Party House by the Nebraska Material Co. When the present office of the Nebraska Material Co. was constructed, there was arranged on the second floor of the building a large dance hall with an elegantly equipped lounging room, decorated in most exquisite style with pink and white as the predominating colors. In addition to this room there are cloak rooms for men and women on the balcony floor. These entire quarters were given over to the men for their evening's entertainment, while the ladies, to the number of seventy-five, were tendered a banquet in the rose room of the hotel. This room was the headquarters of the company during the convention.

Every morsel of food at the banquet, from the oysters and the soup to the coffee and ice cream, had been prepared in the most exacting and epicurean manner. The tables were arranged around the hall in U-shape with a few extra tables in the shape of a T at the head of the hall for officers of the association. In the center of the hall one of the neatest and cleanest cabaret shows that has ever been given in connection with a convention entertainment was performed. There was plenty of singing and George Riesley, of Lincoln, amused the retailers with impersonations and humorous selections. The star performers were three young ladies of Lincoln, namely the Misses Mae and Fanny Misner and Edna Smith. The beautiful voices and the excellent piano playing of the trio brought forth the hearty applause of the diners and encore num-tailors virtually owned the house.

The festivities were in charge of J. H. Allen, general manager of the company, and were participated

in by members of the executive and office force consisting of Morris Friend, Victor Friend, E. R. Bee, F. N. Blanchard, J. N. Girard, T. C. Cline, C. A. Gates, W. B. Riseley, H. G. West, George Dillon and P. W. Lawrence.

Thursday's Session.

On Thursday afternoon when the ladies enjoyed a matinee performance of "The Birth of a Nation" at a local theater, the members assembled in the convention hall and listened to a talk by F. N. Snell of the Louisiana Red Cypress Co., on the work of that organization.

Dr. Stanley L. Krebs then delivered the most interesting address of the entire convention on the topic: "Two Snakes in the Business Brain." This was acknowledged to be the finest speech ever delivered before a Nebraska meeting. The doctor is an elegant and forceful speaker and held his audience for nearly two hours, swaying them at his will by his power and earnestness.

Dealers Attend Theater Party.

A theater party was tendered by local dealers on Thursday evening, which, in addition to being composed of an excellent bill, was made still more enjoyable for the visitors by some special stunts put on expressly for them. About 900 tickets were distributed to the visitors and their friends and the retailers virtually owned the house.

Friday Morning Session.

At Friday forenoon's session the assembly was addressed by Secretary Roberts of the Nebraska Retail Hardware Association in the interests of a state federation of all organized commercial associations.

Dr. Krebs then gave his second address, "The Power and Pull of Suggestion in Advertising and Salesmanship," which met with the same hearty appreciation that had marked his first talk.

In the afternoon, reports were given by the treasurer and various committees. The slate selected by the nomination committee was unanimously elected, as follows:

President, S. W. Lightner, of St. Edwards.

Vice-President, F. C. Krotter, of Palisade.

Directors for three years, H. W. Galleher, of Bassett, and R. L. Avery, of St. Cloud.

The meeting was then addressed by E. D. Tennant, of St. Louis, secretary-treasurer of the "Hoo-Hoo," who gave a concise history of the organization, together with its present condition, hopes and aims. Following this was an address by Secretary R. S. Kellogg of the National Lumber Manufacturers' Association, who gave an interesting talk along the lines of national advertising and made a strong plea for more and better advertising by the retailer.

The insurance department of the association re-elected their officers for the ensuing year and chose H. W. Galleher, of Bassett, and R. L. Avery, of Red Cloud, as directors for three years, succeeding F. C. Krotter, of Palisade, and M. Campbell, of Atkinson, whose terms expired.

Christmas Tree Banquet.

On Friday evening a banquet was served at the hotel to about 200 persons. A feature of this affair was a Christmas tree, whose load of presents made much merriment. L. C. Oberlies, of Lincoln, was toastmaster, and speeches were made by the following named men: H. M. Buschnell, of Lincoln, "The Outlook;" William Krotter, of Stuart, "Preparedness;" S. R. McKelvie, of Lincoln, "Community Clubs;" Ex-President Good, "Me, Taft and Roosevelt."

The entertainment during the various sessions as well as that furnished at the ladies' banquet on the first night and the association banquet on the last night, was furnished by Bess Gearhart Morrison and her excellent company, and it was very highly appreciated, Mrs. Morrison repeatedly being obliged to refuse encores so that the business might be con-

tinued. Taken all in all, it was one of the most successful and satisfying meetings the association has held in recent years.

Incidents of the Convention.

Prominent among the manufacturers at the various sessions and festive occasions of the association was F. O. Gully, president and general manager of the Ozark White Lime Co., Fayetteville, Ark. In addition to writing up orders for carloads of lime, boosting his three brands and shaking hands with all of the 500 dealers who are his friends, he managed to keep busy by distributing an advertising card which principally answered the question "Can a fat man keep busy?"

Sunderland Brothers, of Omaha, made quite a hit with their sunflowers, which were distributed by the prettiest girl in Nebraska and her cousin. The artificial flowers told the story as J. A. Rockwell, treasurer and sales manager, told it to the representative of ROCK PRODUCTS AND BUILDING MATERIALS: "We are distributors of the Sunflower Portland Cement Co. in the state of Nebraska." A flower adorned the coat lapel of practically every man in the convention regardless of what commodity or what brand he sold. The reason for this was the fact that none other than Miss Opal Crumbliss, who captured the first prize in the Nebraska and sixth prize in the Panama-Pacific International beauty contest, assisted by Miss Ruth Dye, a cousin and also a beauty, handled the flowers and pins.

The Western Bridge Supply & Lumber Co., of Omaha, distributed souvenir pencils with practical vest pocket clips, containing calendars.

J. H. Von Steen, of Beatrice, also distributed souvenirs.

C. C. Morgan, representing C. W. Hull Co., of Omaha, presented each one of the visiting delegates with a pocketbook.

The W. S. Dickey Clay Manufacturing Co.'s headquarters were in charge of W. T. Carroll and J. H. Symons.

H. C. Koch attractively advertised the fact that the Iola Portland Cement Co. was represented at the convention.

The Dewey Portland Cement Co. furnished plenty of literature to convince retailers that practically everything known to man can be made of cement.

The Lehigh Portland Cement Co. was represented by George P. Schwaab, who had a smile and a handshake for every retailer, whether he was a Lehigh dealer or not.

Possibly the most popular and surely the busiest man in the convention was Secretary E. E. Hall. Between attending the various sessions, securing a complete registration of all present and shaking hands with every man and woman, as he or she entered, he was kept on the job all of the day and a good part of the night.

The interests of the National Builders' Supply Association were taken care of by President J. H. Allen and Secretary L. F. Desmond. Unfortunately Mr. Allen was taken sick during the convention and was forced to undergo a slight operation.

E. A. Hamebrath, of Mason City, Ia., represented the North Western States Portland Cement Co.

John J. Flood, the congenial sales manager of the Patent Vulcanite Roofing Co., Kansas City, Mo., was on the ground to explain the various uses of prepared roofing.

A. D. Mann, of Des Moines, Ia., made it his particular business to see that the name "Atlas Portland cement" was not neglected in the many activities of the convention.

Clark M. Moore and Harry O. Warner came up from Denver to represent the Colorado Portland Cement Co.

Another Denver salesman was Adolph W. Otterstein, of the United States Portland Cement Co.

The McCormick Lumber & Supply Co., of Pittsburgh, Pa., organized to do a general business in lumber and builders' supplies; incorporators: George E. Evans, G. Bruckman and J. F. McNaull.

Revision of Building Code.

Nashville, Tenn., Jan. 18.—The Nashville Builders' Exchange held its annual election of officers on Jan. 4. J. A. Daugherty was elected president, this being his second term as head of the organization. J. W. Patrick was made first vice-president and Joseph H. Peter, second vice-president. Lee Parrish was elected treasurer, and E. Y. Fitzhugh, sergeant-at-arms. Directors, including representatives of all branches, were elected as follows: T. J. Christman; E. B. Sneed, W. H. Grewar, Joseph H. Peter, F. J. Ehrhart, E. T. Lewis, A. J. Dyer, W. F. Creighton, T. B. Agerton, W. J. Wallace. Secretary Parrish was re-elected to that position by the directors at a later meeting.

Nashville contractors are much interested in the revision of the building code. This is being undertaken by a committee consisting of a member of the city commission, the fire chief and the building inspector. A committee of the builders' exchange, consisting of Messrs. Daugherty, Sneed, Grewar, Christman, Agerton and Parrish, is consulting with this committee. In all respects, the interests of the builders will be conserved. The revision will increase fireproof construction, it is expected, which will, of course, be a good thing for dealers in concrete, clay and fireproofing materials. In addition, an attempt is being made to eliminate unnecessary provisions.

The Nashville section of the Engineering Association of the South, of which many material dealers and contractors are members, now holds weekly meetings, held at the noon hour. The change from monthly to weekly meetings was made after the annual meeting of the Association in Nashville, on Dec. 18. At a recent meeting, the chief of the fire department was a guest and made a plea for the establishment of a district in which only fireproof construction would be permitted. These remarks were made in connection with a talk on the revision of the code. Roy Kern, a local architect, said that many provisions in the present code render it nearly impossible to design a fireproof building. The new code is expected to eliminate this trouble. The society appointed a committee to consult with the committee having the revision of the code in charge. The members, during the discussion of fireproof construction, generally held that a requirement of greater fireproofing of buildings would not lessen the amount of building done, as the decrease in fire risk would more than counterbalance the initial cost.

PACIFIC COAST BUILDERS' EXCHANGES.

San Francisco, Cal., Jan. 18.—The Masons' and Builders' Association of San Francisco met Jan. 3 to elect officers for the ensuing year. The following were elected: President, Emil Hogberg; first vice-president, E. S. Rainey; second vice-president, A. Reed; secretary, W. S. Scott; treasurer, J. E. Brennan. Jerome Collins, W. S. Scott and Thos. F. Mulcahy were elected on the arbitration committee, and Thos. J. Campbell, A. W. Lawson, W. A. Rainey, N. Larsen and J. J. Butler as directors.

The annual meeting of the Builders' Exchange of Alameda county, Cal., was held at the new Exchange headquarters at 1515 Franklin street on the evening of Jan. 8. Directors for the new term were elected as follows: Frank Oates, A. Hillman, J. P. Woods, Al. Poulsen, P. N. Winlund, J. Pedgrift, William Makin, O. W. Fletter, H. C. Steinbach, E. G. Hunt and O. A. Edwall. According to the reports of officers, the Exchange was shown to be in good shape, with revenues exceeding the expenses. It was resolved to hold a membership meeting the first Monday of each month, from one to two P. M.

The business of the meeting was concluded early, and the members adjourned to the Hotel Oakland for their annual banquet, which had been arranged for by O. W. Fletter, E. G. Hunt and Al. Poulsen. Wil-

liam Makin, president, acted as toastmaster, and interesting talks were given by P. F. Bradhoff, secretary of the county General Contractors' Association; F. Bilger of the Oakland Paving Co.; Robert Knox, oldest member of the exchange, and several other prominent men. A number of the members also carried out some highly amusing entertainment stunts, all of which were greatly enjoyed; and altogether the celebration was a great success. It is announced that the exchange will this year conduct a campaign for a membership of 1,000.

Building Material Exchange Dinner.

New York, Jan. 18.—The Building Material Exchange of New York City held its annual dinner and get-together gathering at the Hotel McAlpin on Jan. 11, and it was one of the most successful ever held in point of attendance and enthusiasm. The arrangements were in charge of George P. Molitor, Thomas B. Miller, Joseph F. Miller and A. E. Tuthill. It was featured by an address by Congressman William M. Calder on "Preparedness" and a vaudeville entertainment that was of exceptional merit, consisting of practical illustrations in sleight of hand of changing a losing account into a profitable one, and a few lessons in committing to memory some of the popular ditties of the day.

These dinners of the Building Material Exchange are among the magnets of the business year and when the arrangements are placed in the hands of such experienced entertainers as the secretary and former presidents of the exchange as this one was, the word goes forth without let or hindrance to loosen up on the necessary V and be there. This year there was a natural curiosity to check up by word of mouth the newspaper and magazine prosperity talk. When P. J. Carlin, Superintendent of Buildings, in Brooklyn, came in there was a grand scramble in his direction to find out how much he knew about the impending building boom over there.

When "Joe" Miller landed, accompanied by Frank H. Smith, the man who has put Union County in New Jersey, on the Republican map as a stronghold for that kind of national preparedness that brings prosperity and backs up his sentiment by going into one of its cities and creating a little demand of his own for building materials, there was a similar pow wow as to what New Jersey had to offer this year in the form of optimism and orders for cement, etc.

President Thomas B. Miller, of the Exchange, could not get away from the inquiring throng even though he was the host of the afternoon. But the authorities of the gathering were primed with facts and figures and the delegates, after hearing the village songstresses and the legerdemainiacs, professional and unprofessional, all declared that Congressman Calder was about right when he said:

"The subject of National Preparedness is uppermost in your minds today. The cry rings out throughout the land to do something, to act, to talk, preach and shout preparedness, but there is something about national preparedness that interests you and that is a national preparedness in establishing higher standards of building construction. We hear a great deal about higher costs of construction and higher costs of materials, but it is incumbent upon you to see that the high standards of American construction shall be supported, encouraged and maintained in the face of high prices. It is for you to see that the local, state and national building laws are established and maintained."

He then launched forth into the subject of military preparedness and at the conclusion Superintendent Carlin, who was scheduled to speak, lead the cry for the opening of the vaudeville program and so ended the formal speech making. The dinner was a great success.

Brevities of the Retail Trade.

The West Virginia Lumber and Builders' Supply Association has decided to hold its next annual convention at the Hotel Windsor in Wheeling, W. Va., Feb. 18 and 19. Quite a few Pittsburgh retailers are likely to attend the convention as their interests are quite identical.

The Ellwood Lumber Co., of Pittsburgh, Pa., has bought 47,000 square feet of ground at Meade street and Lexington avenue, East End, for \$40,000. On the property the company will erect a building to cost \$50,000 for the handling of lumber and builders' supplies.

One of the big railroad projects which will soon take the attention of big dealers in builders' supplies, is that of the Lake Erie & Youngstown Construction Co., which has increased its capital from \$1,000 to \$200,000, and will build the Lake Erie & Youngstown railroad so long contemplated between Youngstown, Ohio, and Conneaut, Ohio.

The James G. Crispin Lime & Cement Co., a leading building material concern of Cincinnati, Ohio, has obtained due authority to increase its capital stock from \$20,000 to \$35,000. The change indicates no alteration in the management or control of the company, but was made to enable expansion on account of increasing business.

The King Lumber Co., general contracting firm of Charlottesville, Va., has been awarded contract for erection of a Y. M. C. A. building at Bartlesville, Okla., and would like prices on brick, limestone, structural steel, crushed stone, sand, cement, plumbing, heating, wiring, plastering, millwork and roofing. Shattuck & Hussey, Chicago, architects.

The Paducah, Ky., Builders' Association has been organized, all of the contractors, brick, lumber and electrical supply dealers being members. The new association will be affiliated with the Paducah Board of Trade.

W. W. Broadbuss and Tom Chenault, of Richmond, Ky., have taken over the business of the Richmond Coal & Supply Co., taking possession on Jan. 1. These men are very popular in the Richmond district, and should do well with the line of builders' supplies carried.

G. E. Kneeder Construction Co., Ligonier, Pa.; organized to do a general business in lumber and building materials; incorporators: G. E. Kneeder, L. P. Wentzell and H. H. Weldin.

Italian Mosaic & Tile Co., Ltd., Toronto, Canada, capital \$40,000; to manufacture and deal in tile, terrazzo, mosaic, cement, lime, plaster, whiting, clay, gravel, sand, marble or other stone, brick and all classes of building supplies.

The Balliet Supply Co., Appleton, Wis., capital \$30,000; incorporators: Stephen Balliet, J. H. Balliet and Charles A. Green. A general building supply and coal business will be carried on along the same lines that it has been conducted in the past by Stephen Balliet.

SEEK INFORMATION REGARDING VIBRATION.

Recognizing that practically every one is certain that higher speed, better work for machines, and greater human efficiency are possible in a stable as compared with a vibrating building, but that exact data proving this fact are difficult to obtain, the Aberthaw Construction Co., of Boston, Mass., is undertaking an exhaustive investigation in the effort to bring together conclusive evidence. They will greatly appreciate any suggestions or reports of experience that our readers may be able to send to them. These may have to do with any aspect of the case that will assist in the collection of facts or the reaching of conclusions.

In a communication to ROCK PRODUCTS AND BUILDING MATERIALS, C. F. Lally, vice-president of the Lakewood Engineering Co., says: "We have been overwhelmed with work here; in fact, we have never seen business as good as it is now."

N. B. S. A.

Why Should I Attend the Convention?

In less than one month's time, the seventeenth annual meeting of the National Builders' Supply Association will be a matter of history, and we would dwell at this time for a few moments on the thoughts of what this history shall be.

It is an unquestionable fact that every movement that has had for its object the betterment of conditions under which we all labor has had to contend with the opposition that always presents itself before the march of progress. The final success or failure of every such movement has been based on the real facts that lay behind the propaganda.

The National Builders' Supply Association, upon its organization some eighteen years ago, started forth upon the principle that organized effort was the spirit of progress and, therefore, the greatest asset that the business with which they were associated could possess. It was due to no lack of activity upon the part of those who took the initiative in this movement, nor of the men who have been associated with it since, that the organization today does not contain within its ranks each and every retailer of building supplies in the country. Rather is it attributable to the lack of means whereby its purposes and results could be made more clearly known to those whom it was seeking.

During the past year, instead of pursuing the policy of leaving it to the individual himself to awaken to the need of organized effort, the N. B. S. A. perfected a plan whereby they were enabled to get out and come into touch personally with the dealers in various sections of the country. The officers of the association were, to a certain degree, surprised at the very welcome attitude with which they were received, and even more surprised with the spirit of coöperation that was so plainly evident right from the start. In fact, so pleasing and result-getting were the efforts thus expended that for the past few months the activity of the association has been centered mainly along these lines and has resulted in a very gratifying increase in membership.

The association found out that there was no lack of appreciation for the work that could and should be done, but rather did it have forced upon it the conviction that it was up to them to start what they knew was needed, to keep doing it after it was started, and with this combination, the coöperation of the dealer was assured.

Getting back, therefore, to the matter of the coming convention and what it should mean to the building material dealer, it is timely to say that a convention primarily is for the purpose of bringing together men engaged in various industries who are conducting their individual business on a high plane of efficiency and who seek the opportunity of meeting those who may be similarly engaged in order that they may get together to discuss matters of mutual interest. They are, as a rule, the men who have already realized the fact that organized man is a power and that the unorganized man is merely a part of a mob with no chart or compass to guide him.

Every individual that has attended a convention of the National Builders' Supply Association during the past seventeen years has by his very presence made known all of the above facts as regards his personal and business spirit and while he

has continued to absorb knowledge from these gatherings that has been beneficial to himself, he has also realized that the greatest benefit to himself will only come when he shall be able to attend a convention wherein the dealers of building material from each and every city of the country are represented.

It would seem, therefore, that the greatest work lying before the coming convention and the one that shall be most effective for the future happiness and welfare of the industry and those engaged in it, is a work that will give impetus to the movement which has now been started with the object in view of accomplishing a complete and representative organization.

We do not have to experiment to accomplish this result. Before us are many examples of well-organized effort. Neither do we have to look around to find a plan which we think will be most suitable for our work, for already the plan which the N. B. S. A. thinks is best, has been tried and found not wanting. It is a plan which is fundamentally sound, is perfectly logical and above all not theoretical. It is the desire of the officers of the association that each and every member personally come into contact with its meaning and its possibilities.

The convention will be held at the Cleveland, Ohio, Hotel Statler Feb. 17-19.

If you have not already made your reservation, a line to either the hotel or to Secretary Desmond, 1211 Chamber of Commerce building, Chicago, is all that is necessary to insure your being well taken care of.

We hope to see you there.

DISTRICT MEETING OF THE N. B. S. A.

Several very well attended meetings were held during the past few weeks in the Indiana division, particularly in the Muncie and South Bend districts. The dealers of the latter district, who met in LaPorte, on the evening of Jan. 13, adopted a resolution which they have put forward, having for its object the protection or rather the means for a more complete understanding in the relationship between the dealer and the manufacturer whom he represents. The resolution is one that shall be presented to the national convention in Cleveland next month, and should meet with a very hearty reception.

The most important improvements discovered in any organized industry, if their origin is traced, will be found to have originated in the minds of the active members of the organization, and are not the products of the officers, whose duties are rather for the fulfillment of such ideas.

Regular meetings of the dealers in their respective territories whereby they are enabled to get together and talk over their affairs, is certain to bring out the necessary initiative for many reforms and improvements, and the work which has already been done along these lines simply gives added weight to the opinion of the association that its district plan is the one and only plan which spells success.

Meetings will be held next week in several other Indiana districts, and the work of organization is progressing very fast.

THE N. B. S. A. IN IOWA.

A meeting of the building material dealers of Des Moines, Ia., was held in that city on Friday, Jan. 21, and resulted in what may be called the starting point for future activity of the association in that state.

Every dealer in the city of Des Moines was present at the meeting, and at its conclusion a district organization had been perfected which embraces all of the dealers in town. The committee will operate along the credit plan which was installed by the association, and the active coöperation of everyone present was guaranteed in assisting in the work that must be done in that territory in the future.

FACE BRICK DEALERS ORGANIZED.

The Missouri Valley Brick Club is the name of an association which was recently organized at Des Moines, Ia., in an effort to promote friendly relations between the manufacturers and selling agents for face brick in Iowa, Nebraska, South Dakota and southern Minnesota. At the present time the membership consists of thirteen companies. The last meeting of the club was held in Des Moines Jan. 11, and the next gathering is slated for Feb. 8 at the same place. The annual meeting of the organization will be held March 14. The officers of the club are as follows:

President, R. W. Besley, manager, Hydraulic Pressed Brick Co., Omaha, Neb.

Vice-president, J. D. W. Hall, Twin City Brick Co., Des Moines, Ia.

Secretary and treasurer, Leon Goodman, manager, Des Moines Clay Co., Des Moines, Ia.

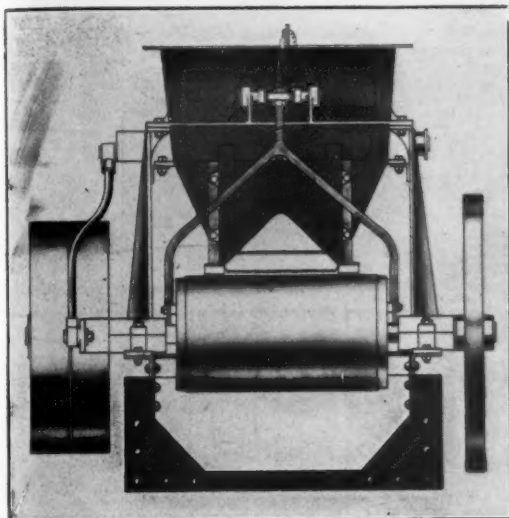
WHAT CONSTITUTES A LUMBER DEALER?

Throughout the country there are many retailers who classify themselves as lumber dealers when, as a matter of fact, actual sales indicate that they might be classified under any of a half-dozen or more heads. As a demonstration of the materials handled and sold by a retailer of this type the following report of a day's sales made by a line yard to the home office is interesting:

- Ten sacks cement.
- Ten sacks plaster.
- Five rolls roofing paper.
- Two hundred feet wall paper.
- Fifteen hundred bricks.
- Three ricks of wood.
- Forty bundles of lath.
- One sack Long fertilizer.
- Ten gallons paint.
- One hundred rods wire fencing.
- Fifty galvanized iron posts.
- Fifty pounds nails.
- Two paint brushes.
- One gallon "Gopher-Go."
- One galvanized iron garage.
- One two by four-eight feet.

The term "building material dealer" has been used to cover a "multitude of sins" and possibly would prove the most suitable in this particular instance.

The King Lumber Co., of Watertown, Wis., has purchased property of the Consolidated Milling, Elevator & Power Co., at Racine, Wis., and will open yards for carrying on a general business in building materials, cement and lumber.



To weigh and regulate the flow of material traveling in a continuous stream over a conveyor.

The Schaffer Poidometers ARE ESPECIALLY ADAPTED FOR

Uniting different materials in correct proportions.
Delivering a predetermined quantity of materials to pulverizing or grinding machinery.
Feeding crushed coal to boilers.
Loading materials into cars or vessels and giving a record of the quantity loaded.

The Schaffer Eng. and Equip. Co.
TIFFIN, OHIO



SALES OFFICE:
Liggett Bldg., St. L.



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MANUFACTURED BY

Union Sand & Material Co.

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THE
**Standard
Brands**
OF
Portland Cement
Lightest in Color
Highest Tensile Strength

ALWAYS UNIFORM

Always the same high quality. Prompt shipment guaranteed at all times and made possible, as each mill is located within switching limits of the two greatest railroad centers of the West. You are assured of your orders being promptly filled.

"HERCULES" REG. U. S. PAT. OFF. (RED STRAND) WIRE ROPE

Uniformity

THE uniformity of Hercules (Red Strand) Wire Rope is assured because all Hercules Rope is manufactured at one plant; it is all made according to the same principles of manufacture; it is all subjected to the same severe tests and inspections, and every rope must prove up to the same high standard.

By virtue of its manufacture being confined to one plant, every process in its manufacture is under the direct supervision of our corps of Wire Rope Engineers.

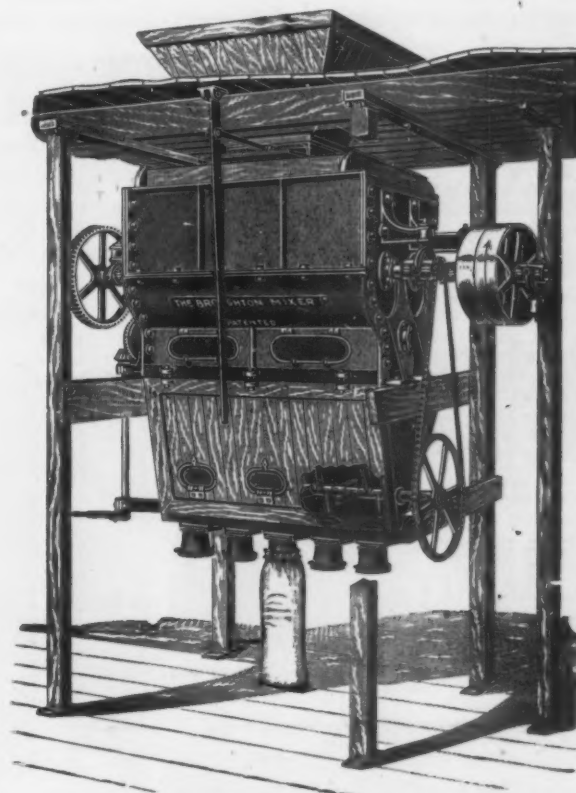
The red strand in Hercules Wire Rope is our guarantee of its quality. Before the red strand is put on we know that the Hercules quality has been put in.

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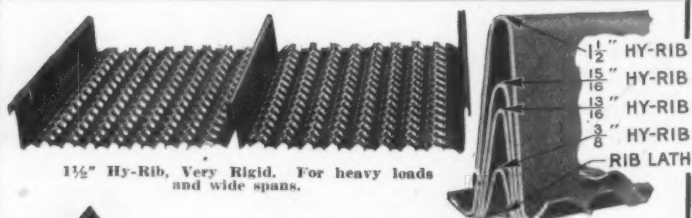
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The most thorough and efficient
Mixers of Plaster, Cement and
Dry Materials. Send for Circular.

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1 1/2" Hy-Rib, Very Rigid. For heavy loads and wide spans.

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THE COMPLETE LINE
The best products in each line
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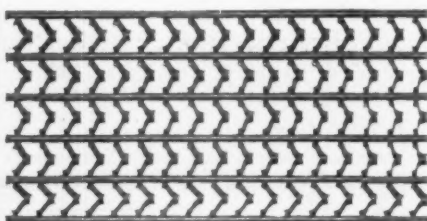
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Roofs, Floors, Partitions, Ceilings, Sidings, Furring
NO FORMS—NO STUDS

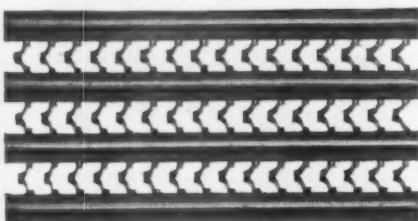
METAL LATH

Hy-Rib Lath, Rib Lath (3 types), Diamond Lath (2 types)

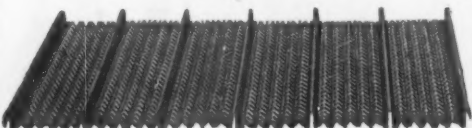
Write for dealer's proposition covering our complete line.
Some good territory open. Act quickly—catalog and
further information on request



Standard Rib Lath in three gauges. Also "B" Rib Lath, similar in design.



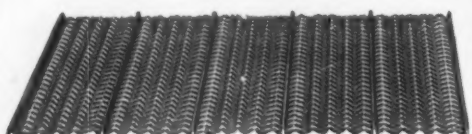
Beaded Plate Rib Lath—Permits two-coat work instead of three.



15/16" Hy-Rib for floors and roofs without forms—sidings, partitions, and ceilings without channels.



13/16" Hy-Rib—widely used in partitions, sidings and ceilings.



3/4" Hy-Rib Lath used as a self-furring lath and in partitions, ceilings, etc., for stud spacings 24" to 36".

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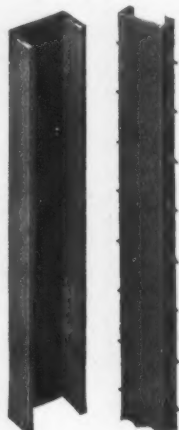
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**Pressed Steel
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Pressed
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Channels.

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1 1/2" and
2".

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Metal Lath—surely! That's the true backbone of strength. But what kind of metal lath? It is well to remember that **weight** adds rigidity and durability; and that Sykes Expanded Cup Metal Lath, having **wider strands**, is much **heavier** than others cut from the same gauge. Judge metal lath by **weight and gauge**—not by gauge alone. Also remember that



Expanded Cup Lath

Self Furring

being fastened direct to sheathing boards or studding, requires no furring strips, and so saves you 5 to 10 cents a square yard.

Best for Interior Work as well as for Stucco Work.

A perfect key is assured by the expanded cup style. Sykes Metal Lath can't be applied wrong.

Approved by U. S. Government for Post Office work; indorsed by architects.

The Sykes Booklet—Complete Specifications for Stucco on Metal Lath—sent free on request—will show you how to save money. Let us send you this booklet and a Free Sample of Sykes Expanded Cup Metal Lath. Write us today—

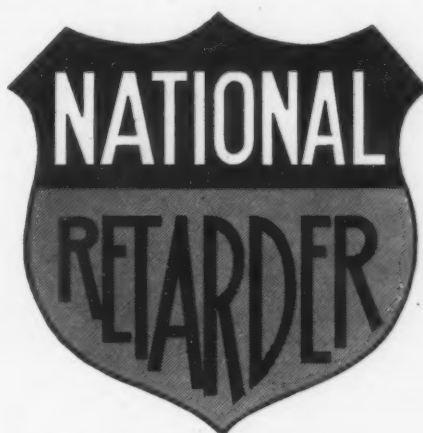
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508 Walnut Street, Warren, Ohio

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Our Motto for Years Has Been---
Quality and Service
Send Your Orders on That Basis **PRICE ALWAYS RIGHT**

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The Ideal Drive Belt

which is fast supplanting leather, rubber, balata and other types of belting for transmission service.

SANDOW possesses great uniform strength and pliability, both of which are essential to a first class drive belt.

Initial and last cost less than leather.

Also manufacturers of

REXALL DOUBLE STITCHED BELTING

IMPERIAL BELTING COMPANY

General Offices and Factory—Lincoln and Kinzie Streets, Chicago

Broomell Improved Lime Kiln



The kiln shown in the illustration embodies several important improvements and is the very latest word in lime kiln design.

Supported on concrete piers.

Cone has heavy cast iron shoes at bottom.

Cone is supported by heavy I beams.

Cone is not bolted to the sole plate.

Cone can be taken out in an hour's time.

All plates above the furnaces are interchangeable.

Joints of plates are covered with butt straps.

Furnaces are built in the most substantial manner.

The kiln is very easy to erect.

The cost is low.

A. P. BROOMELL Manufacturer,
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On account of steel mills being very much crowded with work it is important that your order for lime kilns be placed early.

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NEWS of the TRADE

Improvement Noted in New York.

New York, Jan. 18.—Sentiment among the building material dealers of New York and vicinity is decidedly against any further upward manipulation of prices until the volume of the spring building movement can be determined. There is a very determined bear movement on foot in this market to keep prices of basic commodities down to reasonable levels. Already on two occasions there have been quotations made on ordinary Hudson common brick at \$10 a thousand, wholesale, and at least one sale has been made at that figure on accommodation riding for about 60,000 brick.

Francis N. Howland, president of the Building Material Dealers' Association, doing business on a large scale under the firm name of Candee, Smith & Howland, and one of the trustees of the Building Material Exchange, made this comment upon the trend of building material prices in this market: "I am impressed, of course, with the apparent improvement in building projection and improvement in contract work under way in various parts of the country, but I have not been able to see anything to get wildly excited about. We are still some six per cent below the building operations of 1913, although we are perhaps above last year's figures, which is saying mighty little.

"The most you can say about conditions applying to building materials is that we note an improvement over last year and that while we all hope for better things and a gradual and continual improvement, we are faced with prices that have moved up out of all proportion to even what they were in a normal year. The manufacturers of all building materials are mere children of accident in this crisis. They produced in moderate quantities early in 1914 and late in 1913. Neither they, nor few of the rest of us, expected such a sudden change as occurred after the stock exchanges were reopened and war supplies began to throw into this country a tremendous amount of gold that had to be invested, but they found themselves short of supplies and short of labor and machinery hard to get and an increasing building demand that soon sank deep into reserves.

"The greatest fluctuation has occurred in common brick from the Hudson and Raritan districts. The supplies in the North river district were very low and within a very few months the prices had advanced until I am told that ten dollar brick was being quoted. At the present time the price has gone down to \$8.50 and it is a question as to what will happen. I think the manufacturers will be guided by the wise ones among them and not permit the temporary flurry to frighten them into making quotations that cannot be met by builders. Just so sure as those level-headed brickmakers let the bull influences of the market get away with them they will force the consumption of old brick and substitute materials that will not be for the general welfare of the brick industry in the future.

"This is a time for sober judgments. Let us all bear in mind that there is another limitation to building construction here this spring that cannot be overlooked. The market for building materials is not going to be abnormal simply because of the difficulty in getting structural steel. This is going to be the brake on the trade. We have an operation on Twenty-eighth street that was scheduled to go ahead on Sept. 1, but the whole building is tied up simply because there has not been one pound of steel delivered to that job yet.

"The steel mills are six months behind on the structural orders in this market and if that is the case there is little danger of there developing a demand for other structural materials that will warrant higher prices of brick, cement and other commodities."

New York, Jan. 18.—Differing from the usual estimate of national construction, as shown by plan filings in various cities, there is presented herewith a compilation of actual operations under way at the present time, or completed during the last twelve months, with comparisons for the last five years. These are figured from totals named in actual general contracts awarded, as compiled by Dodge Reports, and gives the building material manufacturer and retailer a very close view of the actual stability of national construction. Bradstreet's, for instance, reports national plan filings for all of 1915 as \$822,197,000 or a total gain over 1914 of 4.8 per cent. It gives national plan filings in 156 cities in December as \$67,892,361, an increase of 62.4 per cent over the plan filings for December, 1914.

In the accompanying table there is shown a gain for 1915 of 23.3 per cent over the total value of general contracts awarded in 1914:

January	\$ 11,193,500	\$ 15,499,000
February	14,360,500	10,161,500
March	31,418,000	20,708,500
April	24,266,000	22,561,500
May	29,365,000	31,916,500
June	34,351,000	28,997,000
July	20,606,500	13,596,500
August	14,835,000	22,549,500
September	5,724,000	17,499,000
October	19,760,500	16,598,500
November	27,237,000	15,812,000
December	21,738,000	12,073,000
Total	\$254,819,000	\$227,912,500
1915	\$ 10,075,000	\$ 12,481,500
1914	12,505,500	32,657,500
1913	20,737,000	21,519,000
1912	23,310,000	24,863,000
1911	32,102,500	15,562,000
1910	23,598,000	23,710,000
1909	24,297,500	23,237,000
1908	17,270,500	15,001,500
1907	19,675,500	17,850,500
1906	4,890,000	11,912,500
1905	20,884,500	25,313,000
1914	\$232,167,000	\$261,007,500
1913	\$129,204,500	\$160,794,734

STATISTICS ON IMPORTS.

According to a recent report from Consul George E. Chamberlin, stationed at Georgetown, British Guiana, the following commodities were imported into that country in 1914. For the purpose of comparison the figures for 1913 are given:

	1914.	1913.
Bricks	\$12,142	\$ 9,749
Cement	30,625	34,845
Lime	20,510	20,238
Stone and slate	1,677	2,753

The imports of cement from the United States during 1914 amounted to \$8,654, against a total of \$20,717 from the United Kingdom. Lime imports for the same period from the United States were \$348, compared with \$13,233 from the United Kingdom.

The total value of imports of cement into Barbados in 1914 was \$16,330, of which amount the United States supplied \$1,007, the balance being credited to Great Britain.

Cement to the value of \$7,570 was imported into the British West African colonies from the United States in 1912. According to the official statistics there was no cement imported into British West Africa from this country during 1913 and 1914, but building material to the amount of \$16,215 was received in 1912, compared with \$190 for 1913, and \$10 for 1914.

Seasonable Activity at Boston.

Boston, Mass., Jan. 18.—Building activity and projects of the midwinter season in greater Boston are represented by the issuances of 202 building permits in the first fifteen days of the year, according to the report of the F. W. Dodge Co. The valuation on these projects is \$2,176,000.

Seasonable activity is found among dealers in building materials. There is much hope that the New Haven railroad freight embargoes will be lifted in time for the approach of the real season. General Manager Bardo, of the New Haven, intimated relief within two weeks at a conference with business men this week. The situation is better although the decision is just announced that the embargo must hold for the present.

The building outlook for the year is regarded as excellent. In the Back Bay settlement has been made on the site at Massachusetts and Huntington avenue for the \$250,000 postoffice building, combining the Back Bay and Fenway subpostoffices. The architectural department of the Boston Elevated Street Railway Co. for erecting a creosoting plant on L street, South Boston. A bill in Congress calls for a new \$3,750,000 federal building for Boston. Of course the big government drydock will be the biggest local operation of the coming season.

The uniform building bill in the present sitting of the legislature is already under fire by opponents and promises the sharpest fight before the session ends.

Plumbers Union, Local 12, has signed a new scale effective July 1 at \$5.50 a day. The agreement which expired Jan. 1 was at \$5.20 a day.

Memphis Market Stronger.

Memphis, Tenn., Jan. 18.—The aspect for 1916 looks very fair indeed, said J. C. Lovelace, of J. A. Denie and Sons, South Front street. "The good prices our people got for their cotton this season," remarked Mr. Lovelace, "and the situation that has grown out of the war clouds have rather strengthened the markets relatively, if the bug-a-boo of a presidential year does not dissipate this optimism, which is hardly probable this time because of the overshadowing world wide events. Cement tendencies have been stronger and the indications point to a good spring demand on all kinds of building materials."

W. W. Fischer, of the Fischer Lime and Cement Co., was away this week at the Little Rock branch, they having taken over the Carey roofing interests there and are putting in this year a general line of materials at Little Rock, which will constitute an important branch of their business. At the Memphis office it was stated that cement was stronger, mills having put prices up to \$1.49. Lime and sand rule just about the same. Plaster, cement coatings and building specialties also have an upward tendency with local outlook good when bad weather ceases.

The big work on the Harahan bridge goes on, though a few days ago the false work falling into the river cost the builders a damage of about \$100,000, and will delay the completion several months.

The Union Sand and Material Co., Tennessee Trust building, report the sand and gravel trade quiet, it being between seasons. The river is very high now. A good spring trade is anticipated with a preliminary picking up next month.

December Building Increases Seventy-Four Per Cent.

Building construction throughout the United States is enjoying a remarkable period of prosperity. Probably never before have so many cities shown increases and probably never before have the gains been so large. The first argument one will meet in making such definite statements is that we are comparing the December just closed with December a year ago, four months after the beginning of the war, when it was to be expected that the totals would be very low and that the increases this year would be large, yet upon the whole it would not compare with the building operations of the corresponding month for preceding years. This argument would be fetching if it were true, but fortunately it doesn't happen to be true, for the December just closed has been unlike any previous December and like the preceding four months for the last past half-year, in which the figures for each month were far in excess of any previously corresponding period.

Permits were taken out in 101 cities in December for 15,630 buildings, representing an expenditure of \$64,267,289, against 12,822 buildings, involving \$37,033,392, an increase of 2,808 buildings, a gain of \$27,233,897, or seventy-four per cent, according to official reports to Construction News. When the totals are as satisfactory, analysis in extenso is scarcely worth while. The figures in detail are as follows:

Cities	No. of Bldgs.	1915 Estimated Cost.	No. of Bldgs.	1914 Estimated Cost.	% Gain.	% Loss.
Chicago	712	\$10,640,200	532	\$6,214,950	71	..
Boston	486	6,936,000	370	3,288,000	112	..
New York (Boros of Man. and Bronx)	606	6,412,971	498	1,836,816	249	..
Brooklyn	1,262	4,207,930	694	1,598,815	169	..
Pittsburgh	1,262	2,995,596	128	8,473,109	..	14
Cleveland	707	2,936,532	509	1,216,775	145	..
Detroit	601	2,906,860	389	1,440,539	101	..
Philadelphia	926	2,703,070	924	1,281,350	114	..
St. Paul	171	1,816,781	140	510,646	256	..
Omaha	312	1,230,340	265	642,370	148	..
San Francisco	449	1,138,968	473	717,903	59	..
Cincinnati	1,181	1,111,110	806	309,045	432	..
Los Angeles	639	1,030,358	553	651,689	58	..
Buffalo	398	985,000	389	347,000	188	..
Milwaukee	196	760,467	133	420,007	77	..
Rochester	204	647,800	166	363,599	78	..
Omaha	110	643,350	121	210,472	197	..
St. Louis	416	637,977	353	378,791	68	..
Seattle	445	605,385	530	1,298,165	..	58
Springfield, Mass.	87	596,790	43	263,680	109	..
Akron	170	606,425	68	143,420	295	..
Washington	308	540,079	302	396,957	39	..
Evansville	85	528,843	86	15,833	3,209	..
Newark	158	493,487	126	311,472	58	..
Albany	137	438,850	101	330,460	39	..
Atlantic City	151	448,244	155	132,812	232	..
Indianapolis	180	434,768	160	219,460	96	..
Baltimore	197	360,843	188	242,570	48	..
Syracuse	79	239,895	87	145,403	148	..
Haverhill	88	257,550	25	40,960	347	..
Toledo	128	256,838	89	189,043	34.0	..
Youngstown	54	236,125	39	38,402	773	..
San Antonio	159	231,500	108	69,293	283	..
Dallas	85	211,469	84	110,095	183	..
Oakland	253	208,549	229	775,891	..	63
Portland, Ore.	249	206,445	259	1,601,355	..	82
Richmond	84	186,187	72	212,503	34	..
New Haven	87	184,305	80	495,370	..	88
Atlanta	173	235,559	154	132,734	98	..
Jacksonville	68	236,063	34	79,800	197	..
Paterson	46	232,147	38	68,633	238	..
Elizabeth	41	230,828	16	33,518	589	..
Worcester	66	226,822	69	175,440	29	..
Berkeley	70	215,900	70	81,500	265	..
Norfolk	56	198,227	23	54,079	261	..
Louisville	106	196,130	45	188,330	4	..
New Orleans	106	172,892	..	274,178	..	37
Peoria	139	171,371	..	71,800	144	..
New Bedford	40	166,180	47	81,317	104	..
Sioux City	41	165,400	37	67,460	145	..
Canton	48	161,700	84	37,275	214	..
Sacramento	100	153,669	81	59,082	160	..
Columbus	99	150,340	86	1,005,200	..	85
Birmingham	299	141,485	254	100,307	40	..
Quincy	37	138,390	68	149,433	..	9
Grand Rapids	91	130,770	78	125,750	4	..
Stockton	28	129,369	38	25,420	409	..
Bayonne	34	127,348	10	34,400	269	..
Davenport	30	120,985	21	36,450	232	..
Binghamton	83	114,608	80	45,118	85	..
Dayton	111	111,015	85	35,005	263	..
Memphis	108	110,040	88	52,200	111	..
Wilmington	47	108,925	28	12,283	781	..
Fort Wayne	81	106,500	18	37,208	282	..
Erie	67	104,622	49	47,063	42	..
Lawrence	88	103,795	13	152,100	..	25
Pasadena	125	101,373	116	48,648	108	..
Chattanooga	147	99,795	74	9,950	882	..
Scranton	41	99,101	47	128,406	..	28
Cedar Rapids	26	85,000	23	847,650	..	84
Des Moines	40	83,355	87	28,700	193	..
Huntington	49	80,198	35	19,073	320	..
Wilkes-Barre	43	79,788	65	48,029	89	..
Salt Lake City	46	78,760	46	171,400	..	54
Portland, Me.	33	75,280	17	40,000	86	..
Tampa	112	69,370	109	39,292	77	..
Lincoln	86	64,685	8	25,600	83	..
San Diego	114	61,500	7	51,500	10	..
Holyoke	9	57,900	9	38,373	71	..
Springfield, Ill.	27	55,088	74	43,473	20	..
Tacoma	69	54,100	19	39,740	27	..
Pasadena	19	49,475	15	36,200	26	..
Brooklyn	18	46,475	15	14,850	236	..
San Jose	36	45,148	23	42,948	..	86
St. Joseph, Mo.	24	37,331	23	24,395	68	..
Kansas City, Kan.	24	36,895	31	37,425	..	2
Savannah	37	34,475	24	61,352	..	63
Troy	24	33,923	7	6,625	204	..
Topeka	36	26,730	7	23,900	..	4
New Britain	19	22,065	19	18,700	..	19
Allentown	35	21,373	8	10,181	..	81
Superior	35	19,340	28	18,395	..	5
Spokane	23	15,120	19	18,700	..	2
Hoboken	13	12,315	9	12,450	..	76
Saginaw	18	10,795	16	45,835	..	2
Altoona	30	10,601	9	20,079	..	65
Colorado Springs	9	9,985	9	10,000	..	1
Auburn	7	7,000	6	6,385	16	..
Reading	8	7,000	7	6,875	..	28
Totals	15,630	\$64,267,289	12,822	\$37,033,392	74	..

Of a total of 101 cities there were gains in seventy-six and losses in twenty-five, probably the most remarkable showing ever before made since the compilation of building statistics began. The big gains are being made in the large, as well as the smaller, cities. Another thing it is worth while to observe is the large number of small cities in which the totals are growing unusually large, and that some of the larger cities seem to be gradually going toward the bottom of list. This may only be temporary. Chicago had by far the largest volume ever before known in that city, while New York had the largest percentage of increase. Chicago had an increase of seventy-one per cent, Boston 112, New York 249, Brooklyn 169, Cleveland 145, Detroit 106, Philadelphia 114, St. Paul 256, Minneapolis 148, San Francisco fifty-nine, Cincinnati 432, Los Angeles fifty-eight, Buffalo 158, Milwaukee seventy-seven, Rochester seventy-eight, Omaha 197, St. Louis sixty-eight, Springfield, Mass., 109, Akron 295, Washington thirty-nine, Evansville 3,209, Newark fifty-eight, Albany thirty-nine, Atlantic City 233, Indianapolis ninety-eight, Baltimore forty-eight, Syracuse 148, Haverhill 347, Toledo 150, Youngstown 775, San Antonio 383, Dallas 183, Richmond thirty-four, Atlanta ninety-three, Jacksonville 197, Paterson 238, Elizabeth 589, Worcester twenty-nine, Berkeley, Cal., 193, Norfolk 261, Louisville four, Peoria 144, New Bedford 104, Sioux City 145, Canton 334, Sacramento 160, Birmingham forty, Grand Rapids four, Stockton 409, Bayonne 199, Davenport 232, Binghamton eighty-two, Dayton 383, Memphis 111, Wilmington 781, Fort Wayne 292, Erie forty-three, Pasadena 108, Chattanooga 832, Des Moines sixty-nine, Huntington, W. Va., 320, Wilkes-Barre eighty-nine, Portland, Me., eighty-six, Tampa seventy-seven, Lincoln eighty-two, Holyoke twelve, Springfield, Ill., seventy-one, Tacoma twenty-six, Passaic thirty-six, Brockton 226, San Jose twenty-seven, St. Joseph, Mo., fifty-three, Topeka 304, Superior five, Hoboken twenty-one, and Auburn fifteen.

There were decreases in Pittsburgh of fourteen per cent, Seattle fifty-three, Oakland sixty-three, Portland, Ore., eighty-two, New Haven forty-three, New Orleans thirty-seven, Columbus eighty-five, Quincy nine, Lawrence twenty-five, Scranton twenty-eight, Cedar Rapids eighty-four, Salt Lake City fifty-four, San Diego sixty-three, Utica forty, Kansas City, Kan., two, Savannah thirty-six, Troy fifty-three, New Britain four, Allentown forty, Spokane nineteen, Saginaw two, East St. Louis seventy-six, Altoona sixty-five, Reading twenty-eight.

The table presents a better subject for contemplation and meditation than ever before. It is something to think of Pittsburgh, Cleveland and Detroit having a greater volume of building construction than Philadelphia, which, as a rule, has been the third city and in this instance dropped to eighth place, standing slightly higher than St. Paul and Minneapolis. It may not be that Philadelphia is losing, but the other cities referred to are gaining rapidly.

It is believed that this is only the beginning of the great wave of prosperity that is now sweeping over this country.

PERMITS FOR NEW BUILDINGS IN MALDEN.

Malden, Mass., Jan. 18.—A total of 376 permits were issued for new buildings in this city in 1915, at an estimated value of \$893,985, an increase of \$300,000 over the preceding year, and the largest in recent years. Just half the permits, 188, were for the three-family tenement type of building. As a consequence of this report of Building Inspector Charles W. Begge, Mayor Charles M. Blodgett will recommend steps toward the discontinuance of erection of tenement houses and three-deckers.

The West Point Brick & Lumber Co., at West Point, Ky., after being closed down for some months, has re-opened its manufacturing departments.

Louisville Shows Big Increase In Small Buildings.

Louisville, Ky., Jan. 18.—Freezing temperatures have about brought building operations to a close in Louisville during the past few days. A good deal of work is now under way, and as soon as the weather will permit business will go ahead. From general indications building operations in Louisville during 1916 will be far ahead of those of 1915, and the material men and contractors are generally satisfied with the outlook.

Comparison of the building permits of December with those of December a year ago shows that there has been a big increase in the volume of small building in the city. In December, 1914, 55 permits were issued for buildings to cost \$188,330. In December, 1915, 106 permits were issued for buildings to cost \$196,130. It is seen by comparison that the number of permits increased almost 100 per cent, while the value increased less than \$8,000. One or two large home builders are building numerous small residences, costing from \$1,500 to \$2,500 in the western part of the city, and are taking out permits in batches of fifteen to thirty at a time. These houses are mostly of frame construction, with concrete foundations.

R. B. Tyler, of the R. B. Tyler Co., dealers in a general line of builders' supplies, is of the opinion that 1916 will prove a banner year with the Louisville supply houses and contractors. Mr. Tyler stated that the outlook was for more small building than in 1915, and that while 1915 proved a fair year, 1916 should show a big improvement.

The Tyler Building Supply Co. has a contract to furnish 14,000 white enamel "Hytex" brick on the new Capital Laundry building on West Chestnut street. This is the second laundry which has erected a building of white enamel brick during the past few months. The company is also making deliveries, when the weather permits, on a number of large jobs including the Speed, Jacobson, and Bankers' Realty buildings.

Allen R. Carter, vice-president of the Union Cement & Lime Co., has returned from Indianapolis where he spent three days attending a convention. The company is making deliveries of buff brick on the new Western Union building at Fourth and Market streets. This building will not require very much brick as the cut stone trimmings take up the greater part of the front of the structure.

Gray & Wischemeyer, architects of Louisville, are preparing plans for a new building to be erected by the Louisville Home Telephone Co. This building will cost about \$100,000, and will be faced in ornamental brick. Contracts have not been let for the erection, but it is understood that bids will shortly be taken.

MUCH BUILDING IN TEXAS.

Austin, Tex., Jan. 19.—It is shown by the reports of the different commercial organizations of Texas that there were approximately \$70,000,000 expended in the erection of new buildings in this state during 1915. This sum includes only business buildings and residences; the money that was spent for the construction of manufacturing and industrial plants aggregated an additional \$25,000,000, it is stated. Many millions of dollars were also expended for street paving and other civic improvements.

All of the cities and towns of Texas are starting in the new year with much better business prospects than confronted them a year ago. An enormous increase in building operations is anticipated. Already many projects of this character are under way and architects are busy preparing plans for others.

Union Cement and Chemical Co., Portland, Me., capital \$500,000; to acquire mining rights, quarries, etc., and work same, and prepare for market building materials. Papers filed Augusta, Me.

Look for Banner Year in Cincinnati.

Cincinnati, Ohio, Jan. 20.—Local material handlers are finding little active work possible, as far as actual deliveries are concerned, inasmuch as the most severe weather of the winter has been experienced during the past two or three weeks, with more of the same sort in prospect. However, a tour of the offices of the prominent retailers, as well as of those of the leading architects, makes it apparent that there is plenty of work ahead for everybody. The impression continues to grow that 1916 is going to be a banner year in Cincinnati in the building trades, and those concerns which are not now engaged in figuring on big jobs due for early letting are in the minority; while others have contracts already on hand which will call for considerable activity as soon as building weather prevails again.

Figures recently compiled by the Cincinnati Chamber of Commerce showing the in and out movement of building materials and other commodities during 1915 indicate convincingly the improved conditions in building during the year just passed, as compared with 1914. For instance, 7,919 cars of brick were received, as against 6,592 in 1914, and the activity of local yards is shown by the fact that 5,732 cars, mostly of common and hollow brick, were shipped, as against 2,995 in 1915. Of course, receipts of brick were almost wholly of face-brick. The movement of lime, cement and plaster was also heavier than in 1914, 1,314,196 barrels being received, as against 1,233,533 barrels in the preceding year. These figures, however, are going to be raised considerably in 1916, if the amount of big work projected has anything to do with it.

Milwaukee Building Operations.

Milwaukee, Wis., Jan. 21.—While building operations in Milwaukee have been curtailed somewhat of late as a result of the cold weather, there is decidedly more building activity than at this time a year ago. There are enough large building projects under way to keep builders and material men busy for some time to come. Building Inspector W. D. Harper again declares that he is confident that the building investment during 1916 will amount to at least \$17,000,000, a big gain over 1914, when a decided increase over the previous year was shown.

F. G. Moritz, Milwaukee, dealer in building supplies and face brick, formerly located at 614 Caswell building, has moved into new and larger offices at suite 312 in the same building. Mr. Moritz is now making a specialty of face brick.

The Wisconsin Roofing & Supply Co., of Milwaukee, has amended its articles of incorporation, changing its name to the Annes Lumber & Supply Co. A. L. Annes is president of the company.

Ricketson & Schwarz, well known Milwaukee firm, handling brick and general building material, was awarded the contract for furnishing 450,000 brick for the erection of the \$500,000 hotel and store building, which is being erected on a portion of the Plankinton site.

SAN FRANCISCO BUILDING PERMITS.

San Francisco, Cal., Jan. 18.—The building inspection bureau of the San Francisco Board of Works reports the issuance of 6,461 building permits in 1915, the total valuation being \$13,990,704, a decrease from the previous year. The December record, however, was \$1,138,966, a material gain over December, 1914. Of the December total, \$357,750 was for eighteen Class C buildings; \$540,880 for 140 frame buildings; \$76,074 for alterations, and \$164,262 for three public buildings. The classified record for the year was: fifteen Class A buildings, \$1,078,628; two Class B, \$224,000; 174 Class C, \$3,044,374; 1,850 frame, \$6,075,675; 4,397 alterations, \$1,638,204; nine municipal buildings, \$492,009; twelve harbor buildings, \$879,814; one Exposition building, \$8,000; one state building, \$550,000.

Nashville Dealers Predict Increase.

Nashville, Tenn., Jan. 18.—Building permits for 1915 aggregated \$1,503,570.65, as against \$1,971,401.02 in 1914, and \$1,923,659.11, in 1913. It is interesting to note that the total of building permits has kept pace with the total of bank clearings, indicating that construction in Nashville has been directly in line with other industrial activity and has not been founded, at any time, upon a sporadic boom. While the aggregate of construction shown by the building permits showed a decrease for the year, the fact that the latter part of the year was better than the previous portion of the year is an indication to local building material dealers that affairs are on the uptrend and that an increase in construction may be looked for from now on.

Building material concerns in this section were aided by the fact that the weather has permitted open air work past the first of the year. While the construction under way during the past few weeks was not of unusual volume, dealers were enabled to keep stock moving in Nashville at a time when in many other cities work was suspended. However, the arrival of freezing temperatures during the past week has brought about a cessation of work.

Several large jobs have been started recently and a number of others are scheduled for commencement at an early date.

Confidence Reigns in Pittsburgh.

Pittsburgh, Pa., Jan. 21.—Retailers are hibernating this week. The thermometer is sizzling down around zero and most dealers are hugging the sawdust fire pretty closely. About the only thing that can be hoped for this week will be a lot of breaks in sewer mains which are sure to occur. Most of them are not worrying over their enforced idleness because they have been busy taking stock of late and are glad of a few days to size up the situation carefully and decide on their purchases for spring trade.

With most of them the year 1915 wound up in good shape. This does not mean that they have all made money. Neither does it mean that the year's totals were in most cases ahead of those in 1914. On the other hand, the majority of firms were glad to say that they had broken even or perhaps a little better in the volume of business. Profits up to the last three months of the year were shaved very close. It was a banner wind-up, however, and fall trade kept up right into the cold winter months. The prospects now are fine.

Architects and contractors report far more building in sight than at any time for several years. There is every indication of a real boom in house building, particularly outside the city itself. The industrial situation in Tri-State territory is now on such a firm basis that there is little doubt but that there will be a grist of house building orders to fill when the spring sunshine comes along. Big projects on the boards of architects are more plentiful now than for a long time although most of them have not yet come to the building stage. The high price of building materials and the scarcity of labor is going to work some hardships with prospective builders and it may be on this account that many of these projects will be delayed until spring for letting.

There are no serious labor troubles in sight now and it is believed that most of the spring wage schedules will be carried along on the present basis. Railroad projects are looming up which mean an enormous amount of business for material concerns this summer. In the building of manufacturing plants there has not been such a boom on in this Tri-State territory for many years and hundreds of plants are announced for early erection. All in all the Pittsburgh district enters the year with high hopes and great confidence.

Conditions in Western Canada.

Winnipeg, Man., Jan. 17.—One of the worst weeks for thirteen years has just been encountered in Western Canada. Temperatures varying from 40 below zero in Winnipeg to 63 degrees below zero at Fort Murray have been recorded. Consequently all outside work has been stopped, and there is practically no building going on at all in Manitoba, Alberta or Saskatchewan. The builders' supply houses are mainly clearing up, stocktaking and getting ready for the spring trade. Collections are coming in nicely according to reports of many of the large supply firms. They all look forward to see the building figures of 1915 easily exceeded.

Already there are signs that there will be an early start made with the building season here, as \$10,000,000 is to be expended to develop northern Alberta. A \$1,000,000 oil refinery plant will be erected at Regina, Sask., as soon as weather conditions permit, by the Imperial Oil Co., one of the greatest commercial companies in the world. Then the Provincial government of Manitoba has disposed of almost \$1,000,000 bonds in New York. This money will help to finish the new legislative buildings which are costing this Province almost \$5,000,000.

EASTERN CANADA SITUATION.

Toronto, Ont., Canada, Jan. 15.—Now that the building figures for eastern Canada for 1915 are available it will probably be of interest to review the situation. The year opened with large decreases over the previous year, but for November and December this has been reversed. For December, 1914, twenty-six eastern cities issued permits valued at \$1,940,819 as compared with \$3,466,032. The total for these same cities for the year 1915 showed a decrease of \$34,951,107, compared with year previous. The value of the permits of these cities for 1915 was \$28,378,947.

The number of permits issued in Toronto last month shows an increase over December, 1914, being 222 as compared with 190, but the value showed a decline, being \$696,863 as against \$835,845 the year previous. This is a decrease of 16.6 percent. November showed an increase of eight percent. The previous months showed a decline, October forty-nine percent, September fifty-five, August sixty-seven, July seventy-five, June seventy-two, May seventy-one percent, etc. For the whole year 1915 the value of permits in Toronto was \$6,651,889, as compared with \$22,049,288 in 1914.

The following list gives an idea of the class of buildings erected in Toronto last year:

742 brick dwellings.....	\$2,102,530
244 brick dwellings altered.....	175,532
1,525 frame dwellings altered.....	197,657
17 warehouses.....	297,450
27 warehouses altered.....	31,190
40 factories.....	130,840
96 factory additions.....	200,657
696 garages.....	273,500
186 stores.....	420,578
299 stores altered.....	165,235
315 sheds.....	73,895
87 stables.....	80,132
7 churches.....	130,150
19 churches altered.....	43,495
8 schools.....	582,500
7 schools altered.....	130,350
28 fire escapes.....	7,293
5 dairies.....	48,000
5 abattoirs altered.....	9,950
2 apartment houses.....	18,500
9 apartment houses altered.....	11,410
3 banks.....	33,000
1 bank altered.....	14,000
Offices.....	556,000

Estimates prepared by the Toronto Harbor Board for 1916 show a proposed outlay of \$2,700,000. The work will start as soon as weather conditions permit. This work includes the construction of more of the sea wall, 3,800 feet of which was built last year.

The Union Cement Co., Owen Sound, will begin the season's operations on Feb. 1. The orders on hand include one for approximately 100,000 barrels for the different departments for the city of Toronto. The plant will open with a staff of between 80 and 90 men.

CONCRETE

GOOD CONCRETE BLOCK HAVE GREAT VALUE.

The Underwriters' Association of New York State has issued circular No. 1083 in reference to concrete block construction written by Lawrence Daw and E. D. Wood, engineers, and signed by R. G. Potter, secretary, in which cement block generally, including both building block, chimney block and other products of cement are broadly condemned in detail and relegated to the sub-standard class in the general conclusion of the technical tirade. While this may have been done with the best of intentions, it is manifestly unfair and unjust to a very important, commendable and beneficial industry, that has and is in many places contributing the enormous benefit of incombustibility in structures that would otherwise be nothing less than food for flames and invitations for conflagrations.

W. K. Squier, manager of the Paragon Plaster Co., Syracuse, N. Y., takes umbrage of the untimely circular in the following forceful expressions:

Considering the circular as a whole, it is as illogical, inconsistent, unfair and misleading compilation of ideas, as could be assembled.

That there are thousands of honorable people engaged in manufacturing concrete blocks, sills, lintels, water-tables, etc., is beyond cavil, and there is an immense amount of money invested by manufacturers making machinery to produce mixers, presses, tampers, moulds, cars, pallets, etc., to carry on this line of work.

There have been millions of brick made and sold that never should have been allowed to be placed in any structure but that is no argument against the use of good brick. That there have been "Jerrybuilders" constructing buildings from time immemorial, cannot be denied, but this applies to all materials and every kind of construction. The argument advanced would as properly apply to concrete construction as a whole; and do the parties responsible for the nefarious circular want to enter the lists, throwing the gauntlet down to all engaged manufacturing cement and cement products? If so, their arrogance is only exceeded by their ignorance of the subject and their adamant nerve to circulate such "tommyrot."

This whole matter would be unworthy of consideration, except for the reason it behooves everyone making or selling cement or materials made from Portland cement, to take notice. Would it not be well to check up your insurance policies and either cancel them or place them in non-board companies as fast as they expire? If it is the purpose of the Underwriters' Association of New York state to countenance any such unqualified tirade against a legitimate business, it stands those engaged in manufacturing cement or selling cement and cement products to place their business elsewhere.

If the association wished to caution purchasers not to buy inferior blocks, etc., and had stated that any block that would not stand 1,000-pounds crushing strength to the square inch, and also advise them to go a step further and ask for blocks that have been integrally water-proofed, and deal only with reputable people of unquestionable standing and responsibility, it would have been in line with what those that have large sums invested in this industry want.

The elimination of fakers or people who, through ignorance or design, manufacture or offer for sale materials that are not suitable or up to a merchantable standard is devoutly to be wished.

The poorest concrete block house we have seen (and we have seen many thousands) is much better than the shacks and shells of wood that are to be found everywhere throughout this broad land.

The concrete block and construction business has come to stay, and will survive in spite of such preachment as the Underwriters' Association have seen fit to circulate.

CONTRACTING FIRM INJURED BY HIGH WATER.

Louisville, Ky., Jan. 18.—On account of high water in the Ohio river during the past two seasons, and numerous delays on dam work, the Ohio River Contract Co. has been delayed considerably and has suffered severe losses in carrying out its government contracts on dams near Louisville and Evansville, Ind. The company has been in financial straits for several weeks, and on Jan. 15 C. B. Enlow, vice-president of the City National Bank, of Evansville, Ind., was appointed receiver. The receivership proceedings were instituted by Madison J. Bray, of Evansville, Ind., treasurer of the company. The

proceedings are of a friendly nature and part of an agreement entered into several weeks ago by large creditors in order to bridge over the present financial stringency in the company's affairs and to prevent the company from going into bankruptcy. It is claimed that the company owes for material about \$90,000 and about \$800,000 in borrowed money, of which about \$500,000 is due to Bray. The company has something like \$1,600,000 coming from the government when certain work on the dam is completed. Jacob Eichel, of Evansville, is president. It is understood that if the work is completed on contract time a profit of about \$400,000 will be made. Mr. Enlow is under bond for \$50,000, and will endeavor to go ahead as rapidly as possible with the work. The contract for widening the canal at Louisville calls for a sum amounting to \$1,250,000 and the contract near Evansville for dams and locks amounts to \$1,900,000.

UNUSUAL CONCRETE STRUCTURE.

An unusual concrete structure is that of the El Ma-te Co. at Shamrock, Tex. The company, which manufactures a fountain drink, determined upon a South American type of architecture for their home



EL-MA-TE CO.'S BUILDING AT SHAMROCK, TEX.

office in keeping with the name of their product. The building is 24x60 feet, two stories with basement. The basement is used for bottling and packing, the first floor for an office and mixing department and the second floor for storage. The building was constructed under the supervision of D. W. Woodley, president of the company.

The Cement Floor Tile Co., Louisville, Ky.; capital \$5,000. The stock is divided into fifty shares of the par value of \$100. The incorporators are: S. W. Graves, formerly of Mobile, Ala., 20 shares; D. D. Graves, formerly of Mobile, 3 shares; and Louis W. Greene, of Louisville, 3 shares. The corporation is authorized to incur an indebtedness not to exceed \$10,000. A plant and office will be located at 539 Franklin street. The company will engage in the manufacture, sale, and installation of building material, making a specialty of cement mosaic work.

W. P. Bannon, president of the P. Bannon Pipe Co., of Louisville, Ky., reports that for the past two years the company has been increasing the size and rebuilding a number of its sewer pipe kilns. The improved kilns have surpassed all expectations in the perfection of glaze and the quality of the ware taken from every point in them. The company is ready for and looking forward to a brisk trade in 1916.

TO ERECT LARGE CONCRETE DAM AT EDMONTON.

Edmonton, Alta., Jan. 18.—The Edmonton Power Co., Ltd., is planning to erect a solid concrete dam, 1,500 feet long by 100 feet high on the Saskatchewan river, above Rocky Rapids, making an artificial lake about sixty miles in area. Electricity will then be generated in a power plant below the dam and brought to Edmonton, which is sixty miles distant, on a steel-tower transmission line. At Edmonton this electricity will be "stepped down" in the company's substation and will be sold in bulk to the city to deliver to the various departments and consumers as at present.

The Edmonton Power Co. has not been granted a franchise and so will have nothing to do with the civic departments or private consumers. The development will cost approximately \$6,000,000, exclusive of an electric railway from Edmonton to the site of the dam, which alone will involve an expenditure of \$1,500,000. The whole work will take four years to complete.

CONCRETE JOBS AT KANSAS CITY.

Kansas City, Mo., Jan. 20.—Court action has been instituted for the condemnation of approaches for the proposed Chestnut avenue viaduct over the north tracks of the Kansas City Terminal Railroad Co. The structure will be of concrete and will cost approximately \$250,000. The contract probably will be let early this summer.

Four concrete paving jobs have been let within the last thirty days by the board of public works of Kansas City. They are Fiftieth street, Woodland avenue to Prospect, \$6,968, to James O'Connor & Son; Seventeenth street, Elmwood avenue to Van Brunt boulevard, \$5,450, to E. F. Wilcox; Bellevue avenue, Forty-fifth to Forty-eighth, \$4,633 to A. Jaicks Co., and Lawn avenue, Fifteenth to Twentieth street, \$6,577, to G. K. Musselman.

Bids are now being received on one of the largest concrete paving jobs this city ever let. It calls for the laying of 75,000 square yards on Prospect avenue, Swope Parkway to Seventy-third street. The preliminary estimate is for an expenditure of \$86,000.

Contracts will be awarded soon calling for work involving about 3,000 cubic yards of concrete for bases for new stills and storage tanks at the refinery of the Standard Oil Co. at Sugar Creek, a suburb of Kansas City.

Work will start soon on the \$60,000 viaduct spanning Seventy-seventh street on the extension of the Paseo. The structure will be built entirely of concrete with two sixty-foot spans. The contract was let to H. H. Hahenkratt, who sublet it to Dan Munro.

Despite the winter weather, construction work has not ceased on the reinforced concrete factory and warehouse being built by R. F. Wilson & Co., Chicago, for the American Can Co., in North Kansas City. The building will be four stories and basement, 260 by 113 feet. Three stories have been completed and the concrete is being set for the fourth.

Los Angeles, Cal., has completed plans for a new concrete warehouse on Dock No. 1, Los Angeles Harbor. Materials will be furnished by the city, and the contract will include the placing of 1,365 tons of reinforcing and structural steel, and 27,000 cubic yards of concrete, and the finishing of 475,000 square feet of floor surface.

There is a movement on foot at Geneva, Ohio, to form a company to manufacture the Harvey system of concrete silo blocks and also the machinery for making them. The proposed company would include in its territory Ohio, Indiana and Michigan, and the plant would probably be located at Geneva, Ohio. George Harvey, of that place, will likely retain a controlling interest in the company, as he is the inventor.

ROAD BUILDING

Canadian Road Makers to Meet.

The Third Annual Canadian and International Good Roads Congress will be held at Sohmer Park, Montreal, opening Monday, March 6, and continuing until Friday, March 10. Over 2,000 delegates from the various provinces of Canada, with representatives from the United States and Great Britain, will be in attendance, and the congress is assured of a success and of beneficial results surpassing those of its two predecessors. The congress is held under the auspices of the Dominion Good Roads Association, with the active support of the provincial associations and governments and the various motor bodies of Canada.

The decision to hold the congress in war time was reached by the executive committee on two grounds, the first being that the provincial governments are continuing their good roads policy, and that therefore the interchange of views on road-making should not be interrupted, and the second being tersely expressed in the slogan of the association: "Good roads are a national asset and form part of the defence works of a nation."

The congress is now a permanently established organization. The two congresses already held have been most successful from the educational, business and practical standpoints. The active propaganda carried on for years has converted the people at large to the principle of good roads, and the aim of the association through the congress is to disseminate knowledge of the best methods of securing what all are agreed upon should be secured—a network of roads adapted to local needs, but linked up so as to form ultimately provincial, national and international systems. To this end the program of the congress is being made year by year less general and more specific. Instead of vaguely advocating the merits of good roads, the speakers are mostly experts who are particularly qualified to speak authoritatively upon the various aspects of roadmaking in all their ramifications—finance, legislation, traffic, location, drainage, foundations, wearing surfaces, binders, maintenance, equipment, municipal improvements, bridges, culverts, and so on. In addition prominent citizens of the Dominion and other countries will address the delegates on subjects closely allied with the good roads movement.

No less than 30,000 invitations are being sent out. These go to government ministers, officials and representatives; county, township and municipal councillors and officials; the officers and leading members of boards of trade, engineers, contractors, good roads organizations, automobile clubs, educational institutions, manufacturers' associations, and railroad and steamship companies; the representatives of technical publications, and last but not least, the various agricultural organizations. Many of these have already pledged their active co-operation, and, judging by the attendance at the previous conventions, the estimate of an attendance of 2,000 next March is a conservative one. The usual arrangements are being made with the railways for the granting of special rates to the delegates under the standard certificate plan, as in the past.

Sohmer Park, where the congress is to be held this year, is one of the largest and most commodious buildings in the city of Montreal. The ground floor, containing 25,000 square feet, will be given over to the Third Annual Good Roads Exhibition, in connection with the congress. Here will be displays of practically everything involved in the making of roads, including government road models, machinery and materials for highways, streets and sidewalks, engineering instruments, road-building equipment and accessories, municipal improvements supplementing good roads proper, caution and direc-

tion signs, technical and other magazines, and other exhibits bearing upon the purpose of the congress. Upstairs is a large convention hall, where ample space will be provided for the business and educational gathering of the congress. Sohmer Park is conveniently situated near the Place Viger Station and Hotel, while an excellent street car service renders it easy of reach from all parts of the city.

The executive committee consists of the following:

B. Michaud, president, deputy minister of roads, province of Quebec, Quebec.

O. Hezzelwood, vice-president, president, Canadian Automobile Federation, Toronto.

George A. McNamee, secretary-treasurer, secretary-treasurer Dominion Good Roads Association, Montreal.

U. H. Dandurand, past president, Dominion Good Roads Association, Montreal.

W. A. McLean, past president, Dominion Good Roads Association and commissioner and chief engineer of highways for province of Ontario, Toronto.

Howard W. Pillow, president, Automobile Club of Canada, Montreal.

J. Duchastel, engineer, city of Outremont, P. Q.

J. A. Sanderson, honorary president, Ontario Good Roads Association, Oxford Station, Ont.

ROAD BUILDERS' CONVENTION.

Rapid progress is being made on the plans for the thirteenth annual convention of the American Road Builders' Association, and the seventh national exhibition of machinery and materials, which will be held at Mechanical Hall, Pittsburgh, Pa., Feb. 28 to March 3.

Among the subjects of papers decided upon by the sub-committee in charge of the preparation of the program are the following: "Railway Tracks on Paved Streets;" "Adaptability of Paving Materials;" "Bituminous Surfaces for State Highways;" "Concrete Roads;" "Recent Tendencies in Stone Block Pavements, Especially with Respect to Size of Blocks;" "Foundations;" "Control of Openings in Pavements;" "Roads at Low Cost for Moderate Traffic;" "Effects of Motor Trucks;" "Contractors' Suggestions to Engineers;" "Brick Streets and Roads."

In addition to these technical papers there will be two others, both of a technical and descriptive character. One will deal with the Du Pont Road in Delaware and the other with the Columbia Highway in Oregon. Announcement of other subjects and of the names of those who will have places on the program will be made at a later date.

The seventh national exhibition of machinery and materials will, as in former years, include displays of practically everything in the way of equipment and material that is used in building and maintaining city streets and country roads. In no previous year have the plans for the show been so far advanced or have so many applications for space been received within so short a time after the announcement by the management that assignments of space could be made. Among those who have already arranged to make displays are some of the largest and most important road material and machinery manufacturers and dealers in the United States, so that the success of the show is already fully assured.

Eight counties in western Kentucky have let contracts for improved roads, which will cost \$95,000, according to Walter P. Brooks, United States senior highway engineer. This amount is exclusive of the amount spent in caring for roads outside of the highways mentioned.

ENDORSE GOOD ROAD MOVEMENT.

Kansas City, Mo., Jan. 18.—While present output is light with cement companies, the prospects are for a large year in the Kansas City district. There is in sight a great deal of municipal work, and several considerable private contracts. The agitation for good roads is proceeding with increasing impetus, and Kansas City is becoming a center for such activities.

E. E. Peake, secretary of the Kansas City Motor Car Dealers' Association, has started a movement for a 1,000 Road Club, which was to have a thousand members scattered over the district to pull for good roads. It seems likely that it will grow into a 10,000 club, and even larger. It is the purpose to bring more system into the exploitation of good roads, and stimulate communities to careful planning and building of highways.

Thirteen Kansas City organizations, as well as the national real estate association, and others, have endorsed the movement, and committee have already been appointed to further the scheme. It is expected that very definite advancement of good roads propaganda will follow. The purpose of the organization, however, will be chiefly to promote the plans to build rock roads, and show the local communities how it can be done. There is no present purpose to carry the actual work of the organization farther.

TO BUILD CONCRETE ROAD.

Chattanooga, Tenn., Jan. 18.—The Hamilton County Good Roads Commission will make its first venture in concrete road construction this spring according to plans now made. One section one-quarter of a mile long and another one-half mile long will be built with the county's forces.

Superintendent Crox, of the commission, has made an estimate of the cost, his figures showing that a road, sixteen feet wide, eight inches in thickness at the crown and six inches at the curb can be built at \$9,012.50 a mile, which is somewhat lower than usual concrete roads cost. Mr. Crox's figures include: 1,825 cubic yards stone, \$1,186.25; 1,216 cubic yards sand, at \$912; 3,650 barrels of cement, at \$5,475; labor, \$912; water, \$9,125; hauling, \$456. In this connection, it may be mentioned that County Engineer Bryan differs with the superintendent on hauling costs, and, in a lesser degree, on other items, his estimate being \$2,489.50 a mile higher.

The commission already owns considerable concrete equipment. It will purchase other equipment and make its own concrete culverts to replace all the wooden culverts now in use in the county.

FIFTH ANNUAL ROAD SCHOOL.

The fifth annual road school of the Wisconsin Highway Commission, which has become a fixture of interest to hundreds interested in road and bridge construction and maintenance, will be held in the assembly chamber of Wisconsin's new state capitol building at Madison, Jan. 31 to Feb. 5, inclusive. At these meetings there is discussed practically every vital question concerning the various types of roads and bridges; methods, machinery and tools used in the construction and maintenance, as well as the state highway law and its requirements and provisions. The exhibit of road machinery and tools, always a feature of the school, will be more complete than ever this year.

The city of Long Beach, Cal., has just completed a new concrete pleasure pier at Belmont Heights. The superstructure stands on reinforced concrete piles, twenty feet above high water, and is 975 feet long, with a minimum width of twenty-five feet, with broad platforms 112 feet wide at the ends.

The Concrete Tile Co., Quincy, Ill.; capital, \$10,000; incorporators, Peter Simons, Ed. J. Eiff, John H. Best, J. Leonard Taylor.

CEMENT

SHIPMENTS OF PORTLAND CEMENT.

New York, Jan. 18.—Startling conditions regarding the shipments of Portland cement from zones Nos. 1 and 2 supplying the New York market are reflected in the closing of 1915. The year showed a gain in shipments over 1914 of 750,000 barrels, which was the total gain developed by the single month of December over the corresponding month one year previous.

October shipments were about the same as those of October, 1914, but in November there was a gain of 500,000 barrels and December shipments totaled 750,000 barrels more than December the year before. Last month's shipments were 230,000 over those of December, 1913, and only 80,000 barrels less than were reported for December, 1912. The normal December shipments from these two zones is about 1,200,000 barrels. It has been estimated that between 55 and 65 per cent of all the cement that moved toward this city last month stopped here. This indicates at least a thirty-five per cent export business which is decidedly heavier than ever before has been recorded.

The stock on hand at the mills in these two districts on January 1 was 150,000 barrels less than at the same time one year ago which corresponds to about a five-days' mill run.

ITALIAN CEMENT INDUSTRY.

The following report from Consul Samuel H. Shank, Palermo, contains a great deal of valuable information relative to the cement industry of Italy:

In Palermo there are two factories producing natural cement. One has an output of 30,000 tons annually and the other of 8,000 tons. The stone from which the cement is manufactured comes from a mountain at the edge of the city. About seventy-five per cent of it is available for making cement. The larger of the mills is contemplating the manufacture of artificial cement and desires to receive offers from American machinery manufacturers for grinding machines and rotary ovens. The capacity will be about 100 tons per day. Information may be furnished to this consulate.

Most of the cement now manufactured is used in Sicily, little being exported to the Continent. Reinforced-concrete construction has been used very little in this district, as there is a building stone available here that is cheap and durable. This stone is very soft when first taken from the quarry and may be cut with an ordinary ax, but after some months' exposure to the air it hardens and is a very durable building material.

The largest users of cement are the factories that make tiling for the floors of houses, and contractors building sidewalks. The cement-tile business has been developed to a great extent and artistic designs are produced in various colors. Most of this work is done by hand. Tiles are usually made about eight inches square and three-fourths of an inch thick. Around a smooth steel plate is locked a frame in which is inserted the design. Liquid cement is then poured into this container to the depth of about one-fourth of an inch, the different colors being used to give the desired pattern. The steel design is then lifted out of the frame, which is filled with a mixture of sand and cement and put under a power press. The frame is then removed and the tile taken out and put on a rack for drying. It is allowed to stand for one month before being used.

BIG CEMENT CONTRACTS AWARDED.

Milwaukee, Wis., Jan. 21.—The committee on highways of the Milwaukee county board recently awarded contracts for 140,000 barrels of cement, aggregating about \$252,469.75, the largest regular contracts ever given by the board. The cement will be used in the construction of thirty-five miles of roads which will complete the Milwaukee county loop. The largest single contract was for 17,300 barrels of cement to be used on Howell avenue and involving \$34,843, which was awarded to the Wilbur Lumber Co., of Milwaukee and Waukesha, Wis.

RULINGS ON CEMENT RATES.

The Kosmos Portland Cement Co. was upheld in a ruling by the Interstate Commerce Commission on Jan. 14 in its contention that the Illinois Central and other railroads were charging unreasonable rates on cement from its plant at Kosmosdale, Ky., to points in Illinois, Indiana and Ohio, and that the rates "subjected Kosmosdale to undue prejudice and disadvantage" and were discriminatory and in favor of cement plants at Sellersburg, Ind.; Mitchell, Ind., and Hannibal, Mo. The railroads were ordered to place reduced rates in effect on or before April 1, 1916.

On Jan. 14 briefs were filed with the Interstate Commerce Commission by a number of railroads which the Lehigh Portland Cement Co., complains are charging unreasonable rates on cement from Mitchell, Ind., to points throughout Kentucky.

CEMENT OUTLOOK EXCELLENT.

Louisville, Ky., Jan. 18.—Business with the cement manufacturers and dealers of Louisville has been comparatively quiet since fall, but from present indications things will shortly open up, and the outlook for 1916 is generally pronounced to be excellent. A good deal of big work is in sight, not only in Louisville but throughout the district.

The Kosmos Portland Cement Co., of Louisville, has resumed operations at its plant at Kosmosdale, Ky., after being closed down for several weeks. About one-half of the normal force is now being employed in the big plant.

INSTALLING NEW EQUIPMENT.

Nashville, Tenn., Jan. 18.—Paralleling, in many respects, the sudden rise of the town of Hopewell, Va., Kingsport, Tenn., in the Eastern part of the state, and near the Virginia line, is experiencing an industrial boom which involves construction running into seven figures. The Clinchfield Portland Cement Co. is one of the big industries of that place and is aiding in the sudden rise that is attracting thousands from all sections. The Clinchfield plant is now installing new equipment that will double its capacity and employ several hundred additional men. The value of the new machinery now being installed is placed at \$400,000.

The Kingsport Brick Co., which now employs 200 men, will also increase its output when new equipment is in place. It is enjoying much prosperity through this boom.

The Dixie Portland Cement Co., whose main offices are at Chattanooga, has purchased 700 acres of land in the vicinity of Richard City, Tenn., near its quarry at that place. It is stated that the price paid was about \$1,500. It is understood that no en-

largement of operations is contemplated at the present time, the object of the purchase being to protect the company against possible suits arising from the operation of the quarry, if the surrounding land and houses were owned by others.

RECEIVER'S REPORT.

Cincinnati, Ohio, Jan. 20.—The report of Guy W. Mallon, receiver for the Superior Portland Cement Co., covering the company's business for the year just past, shows that profits were somewhat reduced, being \$45,610 as against \$69,995, but states that the decrease is due to increased cost of production and to heavy expenditures for betterments, rather than to decreased business. A cash balance of \$36,346 is reported on hand, and available for the payment of creditors, to the amount of about one-third of the approved claims.

PORTLAND CEMENT INDUSTRY IN 1915.

Production and Prices Not Materially Changed From Previous Year's.

An estimate of Portland cement production in the United States in 1915, just made by Ernest F. Burchard of the United States Geological Survey, indicates that the shipments from the mills amounted to 86,524,500 barrels, compared with 86,437,956 barrels in 1914, an increase of 0.1 per cent; the production was about 85,732,000 barrels, compared with 88,230,170 barrels in 1914, a decrease of 2.8 per cent, and the stocks of finished cement at the mills were about 11,583,000 barrels, compared with 12,893,863 barrels in 1914, a decrease of 10.2 per cent. The slight decrease in production and the considerable decrease in stock indicate greater caution in the industry, which in the preceding few years showed a tendency toward overproduction.

The Lehigh district, which produces nearly 30 per cent of the domestic cement, shipped 24,500,000 barrels, produced 24,860,000 barrels and stocked 3,460,000 barrels in 1915, showing increases, respectively, of 2.2 per cent, 1 per cent and 10.9 per cent over the corresponding totals for 1914.

New York State shipped 5,236,500 barrels, produced 5,097,000 barrels and held in stock 825,000 barrels. These figures represent decreases, respectively, of 4.3 per cent, 13.4 per cent and 15.1 per cent compared with 1914.

Ohio and Western Pennsylvania shipped 7,400,000 barrels, produced 7,200,000 barrels and had 750,000 barrels in stock. These estimates represent decreases of 0.9 per cent, 5.2 per cent and 33.8 per cent, respectively, compared with 1914.

Michigan and Northeastern Indiana shipped 5,545,000 barrels, produced 5,550,000 barrels and held stocks of 650,000 barrels. The first two quantities represent increases of 7.5 per cent and 6.4 per cent, respectively, and the third a decrease of 4.3 per cent.

Southern Indiana and Kentucky shipped 2,780,000 barrels, produced 2,840,000 barrels and had 490,000 barrels in stock, the first two quantities representing decreases of 5.2 per cent and 3.1 per cent, and the third an increase of 12.5 per cent.

The Illinois and Northwest Indiana district shipped 10,825,000 barrels, produced 10,200,000 barrels and had stocks of 1,511,000 barrels. These figures show decreases of 4.3 per cent, 11.6 per cent and 29.2 per cent, respectively, as compared with

1914. Iowa and Missouri occupied third place in 1915, with total shipments of 9,200,000 barrels, production of 9,250,000 barrels and stocks of 1,290,000 barrels. These figures represent increases of 3 per cent and 3.3 per cent, and a decrease of 12.4 per cent, respectively, as compared with 1914.

The Pacific coast district showed shipments of 5,867,000 barrels, production of 5,712,000 barrels and stocks of 880,000 barrels, or increases of 16.8 per cent, 19.5 per cent and 11 per cent, respectively.

Cement plants in Kansas, Nebraska, Oklahoma and central Texas showed total shipments of 6,546,000 barrels, production of 6,378,000 barrels and stocks of 786,000 barrels, increases of 8.8 per cent and 2 per cent, and a decrease of 23.9 per cent, respectively.

In Colorado, Utah, Montana and Western Texas the shipments approximated 2,475,000 barrels, the production 2,525,000 barrels and the stocks 300,000 barrels, decreases of 10.2 per cent and 6.4 per cent, and an increase of 42.5 per cent, compared with 1914.

In the two Southeastern districts excellent showings were made in the cement industry. In Maryland, Virginia and West Virginia the shipments were 3,150,000 barrels, an increase of 12.8 per cent; the production was 3,145,000 barrels, an increase of 12.9 per cent, and the stocks were 248,500 barrels, an increase of 4.8 per cent. In Tennessee, Alabama and Georgia the shipments were 3,000,000 barrels, an increase of 16.4 per cent; the production was 2,975,000 barrels, an increase of 11.3 per cent, and stocks amounted to 292,500 barrels, a decrease of 23.7 per cent.

The general prices averaged a few cents lower per barrel in 1915 than in 1914, although toward the end of the year they were considerably higher. The statistics show that the general volume of business was about the same, though it was not uniformly distributed throughout the year. During the early part of the year the demand for cement was not great, and in some districts the industry was depressed during the summer by excessive rainfall, but in the last four months or more a decided change for the better has occurred both in demand and prices, so that the outlook for 1916 is brighter than for several seasons.

IMPROVEMENTS AT WABASH PLANT.

Extensive improvements are being made at the plant of the Wabash Portland Cement Co., located at Stroh, Ind. With a view to increasing the capacity of the plant and to facilitate the manufacture and shipping of Wabash Portland cement, equipment is being added and the motive power changed to electricity. According to D. L. Spickler, sales representative of the company, improvements will be completed and the plant in operation about April 1. Mr. Spickler states that 1915 proved to be a good year for the company and prospects for 1916 are exceptionally bright.

ENGLISH DEMAND CURTAILED; PRODUCTION COST INCREASED.

It is not surprising to learn from the annual report of the Associated Portland Cement Manufacturers that the demand for cement has been considerable curtailed on account of the war, while the cost of production has increased, says The Stone Trades Journal, London. It is only a question of time, however, for with the European conflict out of the way the need for cement will be urgent in Belgium and elsewhere.

Maryville, Tenn., Jan. 18.—It is understood that plans have about been completed for the erection of a large plant at Chilhowee, Tenn., by the Southern Slate Co. to manufacture cement which will be used in the construction of the dams to be erected by the Aluminum Co., of America. It is understood that the company proposes to erect a large plant to make cement for southern trade, and also for export.

CEMENT IN THE CANARY ISLANDS.

Consul George K. Stiles, stationed at Tenerife, submits the following data on American cement in the Canary Islands:

With the city of Las Palmas, Grand Canary, constructing a new cement reservoir, and the municipality of Santa Cruz de Tenerife creating an ambitious series of water tunnels and aqueducts, the cement market in the Canary Islands broadened and strengthened in 1915 despite the much increased cost of the article.

While tight money conditions have prevented the projection of any new construction work of importance since the outbreak of the war, private irrigation work and farm construction have been going on, although at a reduced ratio. Even with extraordinary war freights restraining every line of Canary activity, the imports of cement in 1915 have shown little variation. On the other hand, prices now are far higher than quotations of twelve months back.

While American cement producers have made a certain effort to enter this market, the attempts have been sporadic and not properly followed up. In at least one instance of actual delivery here the rate of freight charged was disastrous, being for freight alone more than twice the value of the cement at New York, and practically equal to the selling price of English cement, now dominant in this market.

It may not be the legal duty of the American shipper to protect his foreign customer as regards such freight conditions, but it is unquestionably good business. It is of the utmost importance that American shippers to Canary ports, in their own interests, should endeavor not to ship merchandise at freight prices prohibitive to buyers at this end. Somewhat closer attention to the shipping situation is needed for improved business relations. American firms, then, are advised of the wisdom of having some understanding with buyers here regarding the maximum freight rates that the cement traffic will bear before shipping to Canary ports. However, a start has been made, and while in 1914 no cement was received from the United States, approximately 166 short tons had reached this market by October 15, 1915, according to local customs figures.

Present prices range about four dollars per barrel of 180 kilos gross, equaling 396 pounds. The only quoted freight rate from England is twelve dollars a ton, and the last prices quoted locally from English sources were at three dollars the barrel f. o. b. at Liverpool. Previous to the war the price ranged about \$2.32 per barrel. In 1914 total imports equaled 3,022 metric tons of 2,204 pounds each.

[A list of the large buyers of cement in the Canary Islands may be obtained from the Bureau of Foreign and Domestic Commerce, Washington, D. C., or its district offices. Refer to file No. 70629.]

BOOKS FOR THE TRADE.

There was recently received in this office a copy of "The New Building Estimator," published by David Williams Co., 231 West Thirty-ninth street, New York City. This book is a comprehensive compendium of general information regarding detailed construction. It discusses at length the various problems which confront the average builder, taking up the cost prices, giving depreciation, etc. The book is an excellent example of the twentieth century method of placing before builders in concrete form all the details of construction ideas.

HIGH RECORD IN PULVERIZING.

The Charles Warner Co., after a careful test, has placed an order for two No. 1 K-B. Pulverizers to be installed for crushing lime in its new plant at Cedar Hollow, Pa., according to a report received from the K-B. Pulverizer Co.

The test was run by the Charles Warner Co. last month at Cedar Hollow, and the results are noteworthy, as they are a new high record for pulver-

izer efficiency. Reducing lump lime for the hydrators from 3-inch to three-sixteenth-inch and under, the No. 1 pulverizer gave a capacity of approximately thirteen tons per hour, with a power consumption of about fourteen horsepower. In other words, this is a rate of about one ton per horsepower hour, which is remarkable, especially when the small size of the machine is considered.

The K-B. pulverizer is the result of years of experience as well as of experiment and careful analysis of the action of hammer-mills in order to determine and eliminate the causes of wasted power. To this is due the high capacity and low power consumption. The pulverizer is built entirely of steel, and is lined throughout with special hardened manganese steel plates. The hammers are easily adjusted to compensate for wear, and the screens can be slid out without trouble to afford ready access to the inside of the machine.

CHINA'S CEMENT INDUSTRY HURT BY WAR.

Consul General Fred D. Fisher, stationed at Tientsin, China, in a recent report to the Bureau of Foreign and Domestic Commerce analyzing the trade of that section of the Far East during 1914, has this to say relative to the cement industry:

"The effect of the European war on local industries is seen in the report of the Chee Hsin Cement Co. (Ltd.) for 1914. During the year there was a net profit of \$231,264 gold. The business of the company was prosperous during the first half of 1914, when the amount of products sold approximated the total amount of the whole of the previous year. Owing to the war, however, railway construction in China was greatly interfered with, and, this being the chief source of demand for the products of the company, it suffered considerably. Car-goes of iron sheets and machinery ordered before the war, most of which were in German ships, were held up, and the goods had to be stored and transhipped. This, with the heavy insurance and the rise in the exchange of gold, made the cost of materials 20 to 30 per cent more than had been expected. The management of the company was obliged to seek business in Vladivostok and American ports; but, owing to severe competition, did not find this very profitable. Large quantities of cement, however, were supplied to the Philippine Islands for construction work there."

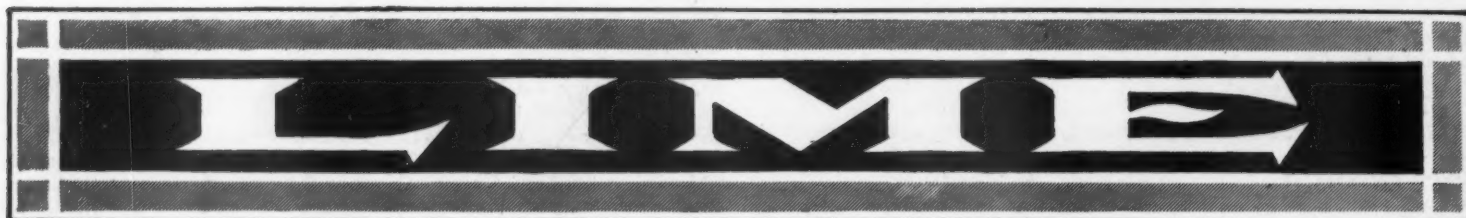
COAST CIVIL ENGINEERS MEET.

Victoria, B. C., Jan. 14.—The annual meeting of the Victoria branch of the Canadian Society of Civil Engineers was recently held in the society's rooms, Victoria, with a representative gathering present. The following officers were elected for 1916: Executive—H. W. E. Canavan, chairman; H. A. Elgee, vice-chairman; E. Davis, treasurer; R. W. McIntyre, secretary; A. E. Foreman and E. G. Marriott, auditors. A hearty vote of thanks was accorded the retiring chairman, D. O. Lewis.

Notice was given that the annual convention of the British Columbia Provincial Division and members would soon be held at Vancouver. A paper on "Public Works in Alberta and Saskatchewan" will be read by the secretary. The address will be illustrated by lantern views.

The St. Mary's Cement Co., St. Marys, Ont., Canada, has been working overtime and Mr. Lind, the manager, states that, in spite of the war, this year has been the best in the history of the company.

ROCK PRODUCTS AND BUILDING MATERIALS comes to us regularly every two weeks; its contents are thoroughly read and appreciated. For further proof of this, please find our check for 1916 subscription, and oblige, very truly yours, Midland Supply & Coal Co.



National Lime Annual.

The annual meeting of the National Lime Manufacturers' Association will be held at the Statler hotel, Cleveland, Ohio, Feb. 2 and 3. The program, now about completed, is full of the very things that the lime manufacturers are most deeply interested in, in connection with their practical operations, as well as in the promotion of sales for the products of the lime producing plants. The subject of "Workmen's Compensation" will be introduced in a paper by Louis D. Schram, chairman of the Workmen's Compensation Committee of the National Civic Federation of New York.

The subject is one which everybody is up against and interested in, because its proper application amounts to the solution of a great many of the executive problems that the lime manufacturer is confronted with.

The subject of agricultural lime will be discussed in a more practical way than it has been treated upon at any of our past meetings. The definite promotion of the sale of agricultural lime and ground limestone is one that has a distinct bearing upon the profit earning department of the business, and is one which lime manufacturers can no longer afford to neglect.

The progress of the work of the hydrated bureau of promotion will demonstrate the value of intensified cooperative building promotion. As usual, every branch of the technique of lime production will be completely covered by the best living experts in each particular line.

The sales managers who engineer the extension of the business will have full swing.

An excursion to the great plant of the Kelley Island Lime & Transport Co. has been arranged for those who attend the meeting for the day after adjournment, Feb. 4.

The invitation of the association is broadly extended to all lime manufacturers wherever they may be located in the United States and Canada, whether they have joined the association or not. All of the expensive promotion which has been produced by the cooperative effort of the association is thus made free to those who think enough of it to come and drink their fill at the great fountain of information that has done so much, and is doing so much, for the lime industry. If it is not worth coming after it is presumed that it is not wanted or needed. Only those who are interested, progressive and successful will come to such a meeting, for only such are able to receive and digest the benefits.

Don't wait until after the meeting is over and then expect to make the lime manufacturers go to the further expense of furnishing you the information in booklet form, as on a silver platter for nothing or at nominal cost, for if you are not willing to contribute your mite of experience, criticism, or amplification, to the discussions, you are not entitled to all of the work of this kind that is contributed by more ambitious rivals for patronage in the lime business. No man who expects to gain his livelihood by quarrying lime rock, burning lime and marketing the product of lime plants, can afford to be absent from the coming meeting at Cleveland, so there is no use of further quibbling about the incidental expense of coming to the lime meetings. You will be welcome and you will get more instructions than the money cost can possibly come to.

Remember the date and show up on time with a smile on your face and a determination in your

heart to work for a bigger and more profitable lime business in the future.

Rally at Cleveland.

To the Lime Manufacturers of the United States:

This is just a little heart to heart talk about the annual meeting, which will be held in the Statler Hotel, Cleveland, Ohio, February 2 and 3, 1916, and you are invited to attend, Mr. Lime Manufacturer, even though you are not a member of the National Lime Manufacturers' Association.

The program this year is kicking out in several new directions, just as the lime manufacturers are broadening out; for instance, we are going to have a discussion on the paper bag question by F. C. Clark, who is the greatest bag expert today, in the United States. He is going to tell us just what type of bag we need in our business.

C. J. Wilder, of Columbus, is going to discuss the "Importance of Lime in Agriculture," and do it more particularly along the line of a lime manufacturer.

Henry Angel, of the Kelley Island Lime & Transport Co., is going to have a series of lantern slides, showing views of the Kelley Island Lime & Transport Co.'s plants. This cannot but be interesting to every lime manufacturer in the United States.

Peter Martin, in a letter to me today, says, "I am paying a great deal of attention to the subject assigned me as to 'How to Improve the Selling End of the Lime Business,'" and his paper will be well worth listening to, as Peter would rather have five cents more per barrel on lime than a speech by Colonel Cobb stating he was the purest and sweetest of mortals.

W. A. Evans is going to take up the discussion of "Modern Appraisal Service" in the lime business, that is, to fully discuss the value of making up a proper valuation of property. This will impinge on Walter S. Sheldon's paper covering "Cost Keeping at Lime Plants," and is all an effort to bring home to the lime manufacturer a good reason why he should get more money for his lime.

Lawrence Hitchcock will give one of his interesting talks on the "Hydrated Lime Bureau." For the last two or three years, he has been driving the hydrate plaster proposition to the front, and has done wonderful work for the lime industry.

Norman G. Hough will have a paper on the "Field Work of the Hydrated Lime Bureau."

W. C. Hay will have a talk on "How Lime Can Be Re-established in the Plaster Field," and Prof. A. H. White, on the "Use of Lime in Stuccos and Rich Mortars."

James R. Dougan will have a paper on "Aluminum Lime Plaster," so you see the development field is not neglected.

Kenneth N. Seavers will have a talk on "Firebrick for the Lime Kiln," the Aero Pulverizer Co., on "The Use of Powdered Coal in Burning Lime," and E. B. Smith on the "Efficiency of Shaking Grates as Applied to Lime Kilns."

Another very interesting paper will be R. D. Donaldson's on "The Application of Central Station Power to Lime Plants and Quarries."

W. E. Emley, lime expert of the Bureau of Standards, will discuss the relative merits of burning lime with wood, coal and coal gas. He will also have a paper on the "Development of the Compression Method of Measuring Plasticity and Sand Carrying Capacity," also, a paper on "A Practical Test for the Working Quality of Lime."

Ellis Soper will tell the story of the use of lime in concrete in the big \$850,000.00 bridge being built at Chattanooga, and J. C. Schaffer will give a talk on hydration of lime.

The Kelley Island Lime & Transport Co. have invited the N. L. M. A. to visit their Marblehead plant on the day after the meeting. This, in itself, is an opportunity to see a great plant in operation, that will be forth the trip to Cleveland.

A matter that will be up for discussion will be the establishment of a National Agricultural Lime Bureau that will treat the use of agricultural lime as the Hydrate Bureau is developing the use of hydrated lime commercially. If we had such a bureau to push the agricultural end of our industry with the good work that is being done by the Government experiment stations, we would soon have to double the capacity of our plants.

The Bureau of Standards will have their barrel expert on hand to discuss with the manufacturers of lime the effect of the law passed at last congress on the lime barrel. The importance of this discussion can only be appreciated by manufacturers who deal in barrel lime.

You will see by these papers, what a strong, comprehensive meeting we are going to have. Won't you make an effort to be on hand not only for your own benefit, but for the benefit of the industry?

The only remuneration the officers of the Association get for their work is the enthusiasm of the annual meetings. The officers of the Association are driving the lime industry to the front, and we certainly hope that you can help them by showing enough appreciation to attend this meeting.

Wm. E. Carson, President,
National Lime Manufacturers' Association.

Drawn from the Lime Kilns.

E. V. Correll, Hot Springs, N. C., is planning the construction of a plant at a point known as Shaleville, N. C., for the purpose of producing lime and ground limestone for agricultural purposes.

J. Rutledge Connor, Ferguson, S. C., is said to be contemplating the installation of a crusher for the purpose of producing limestone for agricultural purposes. The plant will be located at Orangeburg, S. C.

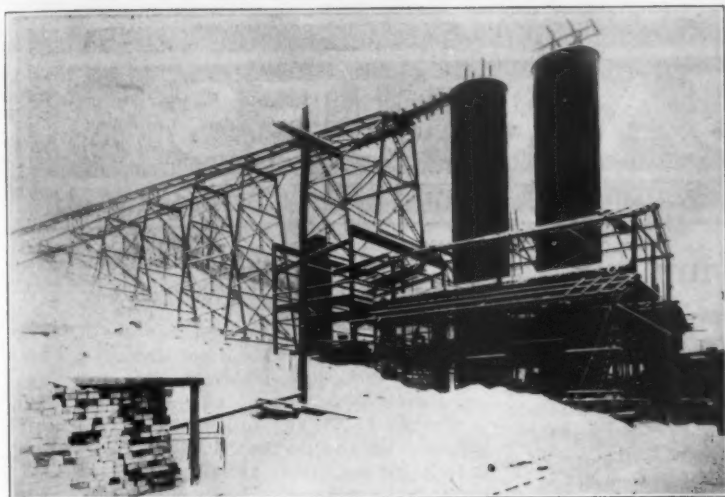
Philadelphia Lime Co. has been incorporated to transact business in the city of Philadelphia with a capital of \$5,000. J. Frank Warren, of Beverly, N. J., is treasurer and one of the directors.

The Northern Lime Co., of which Homer Zipp, of Grand Rapids, Mich., is receiver, is spending \$15,000 at its Bay Shore plant, near Petosky, Mich., installing modern machinery and erecting new buildings.

The Callison-Prince Stone & Lime Co., of Middlesboro, Ky., has changed its name to the Prince Stone & Lime Co.

The Harriman Cement & Stone Co. has been organized by John H. Hatfield, C. W. Chandler, M. A. Rash and J. B. Little. The company will develop 250 acres near Harriman, Tenn. A lime kiln and crusher are to be established immediately.

The national officers of the Hydrated Lime Bureau of Pittsburgh, Pa., are arranging to attend the annual convention of the National Lime Manufacturers' Association to be held at the Hotel Statler, Cleveland, Ohio, Feb. 2 and 3. Some important changes relative to hydrated lime are expected to be discussed.



PLANT OF THE CALCIUM PRODUCTS CO., HOLLIDAYSBURG, PA.



PLANT OF EAGLE ROCK LIME CO., EAGLE ROCK, VA.

Keystone Kilns Applied to All Kinds of Fuel

The first requisite of economy and efficiency in the lime producing business is that of kiln construction and equipment. Like everything else connected with lime, the improvement of this first essential has only taken place in comparatively recent times. Old-time lime burners still view with suspicion anything that looks like an improvement. Everything aside from the old stone pot-kilns, sometimes lined with fire brick and sometimes not, are called "patent" kilns by the patriarchs, who are still to be found in many of the older lime producing localities. But the pot-kiln has disappeared forever, along with the burning methods that were doubtless used near the city Ur, of the Chaldees, before Abraham organized his first caravan to institute the westward movement of all ambitious young men.

Among the pioneers of improved kiln methods and better kiln construction was the Steacy-Schmidt Manufacturing Co., of York, Pa., who have developed their famous Keystone kilns, now accepted as the last word in kiln efficiency by the leading and most successful modern lime burners of this country and elsewhere. This is attested by the fact that no less than 183 "Keystone" kilns are now steadily doing business, which is a better record than held by any other kind of a kiln that has been developed. At first these kilns were made to conform to the old practice of burning with wood as fuel, and later were converted to the use

of coal, and a number of producer gas installations in connection with "Keystone" kilns have been remarkably successful. The "Keystone" kilns, as built today, cover all of these types of fuel supply, and are the result of very careful study of the requirements, especially concentrating to the processes of burning carbonate rock into commercial lime. The best of engineering skill, not eliminating the factor of practical experience, has been used to supply the lime burner with the exactly needed equipment to most economically and steadily produce a commercial lime product.

The Union Carbide Co., Sault Ste. Marie, Mich., first installed a battery of six of these kilns in 1904, to burn with producer gas, and a duplicate of that plant has recently been ordered for construction during the present spring. The additional six-kiln unit is intended to double the capacity of the output of the Union Carbide Co. The new kilns are to be equipped with mechanically agitated gas producers. After an experience of more than twelve years with their "Keystone" kilns, members of the engineering staff of the company are evidently convinced that their first selection was the proper one.

The plant of Eagle Rock Lime Co., Eagle Rock, Va., consists of three "Keystone" kilns, which use bituminous coal for fuel. The management of this plant reports that it is producing 125 to 150 barrels of lime per day per kiln. It is their policy

to add another kiln to their battery about every second year, building up the market for the increased product and so making the business provide for the increase of capacity.

Down in Brazil, the Companhia Fabricadora de Cal is using a four-kiln battery of wood-fired "Keystone" kilns, the plant being located 120 miles inland from Sao Paulo. This plant was built, equipped and put into operation by the workmen of the Steacy-Schmidt Manufacturing Co., and it goes without saying that this is the best and probably the largest lime plant in all South America.

Wood is rapidly disappearing as an available fuel in this country, and improved gas producers are rapidly taking the field as the solution of the fuel problem. Such a plant is now under construction near Hollidaysburg, Pa., by the Calcium Products Co., which consists of two "Keystone" kilns with a Steacy-Schmidt Manufacturing Co.'s full equipment outfit, and will be supplied with producer gas made by "Chapman" producer. Although not yet completed it has been figured to have many special and particular advantages for economy and quality which will probably be discussed more fully in a later issue of ROCK PRODUCTS AND BUILDING MATERIALS.

Here are the three typical types of burning lime, covering the whole field from the original wood fuel up to the latest development, which is the gas producer. In all of these, the "Keystone kiln," with the outfit and equipment, always a part of the Steacy-Schmidt installation, has made good in such numbers as to standardize their kiln installations, no matter what the particular burning problem may be.



PLANT OF THE UNION CARBIDE CO., SAULT STE. MARIE, MICH.



PLANT OF THE COMPANHIA FRABICADORA DE CAL, SAO PAULO, BRAZIL.

With the QUARRIES

Interstate Stone Manufacturers at Columbus

The annual meeting of the Interstate Stone Manufacturers' Association was held on Jan. 19, at Columbus, Ohio, the headquarters of the convention being at the Chittenden hotel. Secretary Jesse Taylor, with Treasurer L. H. Hawblitz, were the engineers of the occasion, and they figured the time schedule in such a way as to dispose of the convention in one busy twenty-four hours of time. All of the regulars, representing much the major part of the crushing operations of Ohio in both crushed rock and crushed slag were on hand.

The closed meeting of the members was held in the secretary's office in the Hartman Building at 10 A. M. for the purpose of electing a board of trustees and the officers for the ensuing year.

It was later announced that the following board of trustees had been elected: A. Acton Hall, L. H. Hawblitz, George A. France, C. L. Reinheimer, W. H. Hoagland, Allen Patterson, J. A. Moore, J. B. Klunk, E. T. Paul, J. F. Pogue and J. F. Mullin.

The selection of officers was as follows: President, S. T. Selby, Toledo, Ohio; first vice-president, Allen Patterson, Lima, Ohio; second vice-president, J. B. Klunk, Cleveland, Ohio; treasurer, L. H. Hawblitz, Toledo, Ohio; secretary, Jesse Taylor, Columbus, Ohio.

Executive Committee—A. Acton Hall, chairman; L. H. Hawblitz; W. H. Hoagland and S. B. Selby, ex-officio.

A committee was appointed to co-operate with the executive committee in the matter of extending and improving the promotion work of the organization so as to give more attention to the development of the other uses of crushed rock than road work. Concrete aggregate, ground limestone for agricultural use, and all other commercial outlets of the crusher product will hereafter be given more definite attention.

Open Session.

The main dining room of the hotel was made into an assembly hall, and Secretary Taylor in his capacity of Master of Ceremonies, called the meeting to order with the explanation that the Interstate Stone Manufacturers' Association was doing everything in its power to work in perfect harmony with the state highway department. He said that in all of his examinations as an expert he has found that the roads built by the State Highway Commission were in every instance a credit to that arm of the public service, and that there was little to be said further on the topic of quality wherever a state road had been built. He dwelt upon the importance of maintenance of the roads already built, which is quite as important a factor as the construction of new mileage in keeping the people of the state of Ohio out of the mud.

The first speaker introduced was A. H. Hinkle, from the Bureau of Maintenance and Repair, State Highway Department of Ohio. Mr. Hinkle said that road work in this state represents every type of modern road construction. The vast preponderance of the good roads system is represented by waterbound macadam. There are more brick roads in Ohio than in any other state. Then there are many miles of penetration method roads, glutrin surface coats, and asphalt carpet coats and concrete roads in a number of localities, to say nothing of the old fashioned gravel and clay roads, which still represent more than half of the total mileage of the public road accommodations of Ohio.

The Bureau of Maintenance and Repair has made a very careful investigation of the methods and costs of maintenance for all the various types of roads. In the examination it has been demonstrated that each and every type of road requires constant inspection and prompt repairs to constitute a maintenance which will so conserve the investment in a road as to keep the benefits of the same available for the use of the people.

It is found that methods of repair on some of the newer types of road were excessive in cost, because of the necessity for moving considerable equipment from place to place for comparative insignificant areas of road surface, and methods for repair and maintenance of one or two types have not yet been perfected so as to secure satisfactory results in comparison with the cost of such repairs. The macadam type of road, being the best known, both on account of the extensive mileage and its long history in service, is the best known and easiest to figure in the matter of repair and maintenance, but the principal features bearing upon the repair and maintenance of all other types of road were rapidly being adjusted, so that known factors for estimation will very soon be developed. The speaker dwelt upon the importance of the work of the Bureau of Maintenance and Repair, which has only been established a short time, and has found that its mission is an indispensable factor of road promotion, because it keeps the people interested in the use of good roads after they have taxed themselves to secure such an improvement.

J. R. Chamberlain, from the Bureau of Bridges, State Highway Department of Ohio, next addressed the meeting upon the subject of "Bridges, Big and Little." The speaker went into the technique of bridge construction, and went more particularly into the discussion of bridges of the concrete type which have made the best records for permanence and consequently are steadily growing in number. He related several incidents of the inspection of bridge work, and stressed the importance in all concrete bridge work of getting the re-inforcing rods placed in the forms in exactly the place designated for them to go in the blue prints of the design. He said that this feature has always been the greatest obstacle in the way of good bridge construction. Contractors and others interested in bridge work must be drilled in the importance of placing the steel which is solely designed for the purpose of exerting tensional values exactly where the designing engineer has figured the steel to go. He said that not one case of failure or unsatisfactory results had yet gone to record where it was not attributable to carelessness in the placing of the steel reinforcement, and every bridge job where the steel was properly placed has given perfect satisfaction and is a permanent and dependable highway improvement. He related incidents with regard to little bridges and culverts, and referred to the valuable information that the inspection of the flood damage of 1912 had given to the bridge department for future guidance in this respect. He stated that the bridge department was now working on definite and exact information as to the indispensable requirements for bridge anchorage and every other part of bridge work, and although experienced contractors might disagree with the state specifications, it is quite unsafe to depart in the slightest degrees from such specifications as are checked in the high-

way department, for all of them are founded upon known factors gained and calculated from practical experience.

The next speaker to be introduced was Arch W. Smith, cartographer of the State Highway Department. He spoke upon the importance of drainage and the disposal of ground waters from the right-of-way of all kinds of road improvements. He said that drainage was the first requisite of every road undertaking and that in ancient times nothing else but drainage was considered necessary for the construction of a road. Simply to make an adequate ditch on both sides of a right-of-way and to connect these ditches with adequate natural outlets will keep the right-of-way in fair condition for use as a road the major part of every year. The covering of the surface with hard material, however bound together, was always an after consideration in making road improvements better, but without adequate drainage the best type of road built in the most expensive way will not survive through a single winter with the alternate freezing and thawing processes of nature.

He said that invariably improved roads had been found in very good condition through elevated sections where drainage was a simple proposition, and that all of the bad sections of road were those difficult to drain or those where the drainage had been neglected or improperly done. The technique of proper drainage has to do with a knowledge of surface levels, and the path to the final outfall of the drainage disposal. He spoke of the under-drainage of roads which is known to keep the entire bed beneath the road perfectly dry, and in such cases weather conditions through a long period of years have never had any appreciable deleterious effect on the road surface itself. Drainage is the matter of first importance and indispensable in every road improvement.

H. M. Sharp, Chief Engineer of the State Highway Department, spoke about the contractors, the materials and methods of building roads of the macadam type. He also related in cheerful vein some of the duties and the trials and tribulations of the engineering department and of the staff men out in the field work. He appealed for harmony between the contractor and the engineer, and spoke of the importance of properly manufactured material for making the macadam road what it can be and ought always to be, in order to reflect the credit to the old standard type of roads which is its due, and which it has earned in the estimation of the public long familiar with its dependability.

The last speaker of the session was S. M. Williams, of Lima, Ohio, sales manager of the Garford Motor Truck Co. Mr. Williams for more than a year has been conducting one of the most original and valuable campaigns for the promotion and extension of the good roads movement that has been recorded. He promptly stated that he was not present for the purpose of talking the advantages of the Garford motor truck particularly or any other, but that he had noted the efficiency of the motor truck would some time in the future be limited by the mileage of good roads over which a motor truck could be operated economically. Indeed such limitations have already been found and recognized.

Mr. Williams called attention to the fact that nearly all of the road conventions were made up for the most part of automobile owners and others directly interested in improved highways, who are already enthusiastic over the subject of good roads, while the majority of the voters on road improvement never know that such meetings are held, and

have not been in touch with any of the promotion work that has been and is being done. Recognizing this condition he has been working to the end of making road knowledge and the advantages of the same reach out into the country, to the people living at the farther end of the proposed road improvement, so that they can be made to realize the advantages to them and thereby rally their support and concentrate their enthusiasm in every road movement. In a later number we hope to have pertinent extracts from this excellent paper for the attention and use of our readers.

The meeting then adjourned.

The Annual Banquet.

The annual banquet was held in the main dining room at six o'clock. The inimitable Jesse Taylor, secretary of the organization, acting as toastmaster. Governor Frank D. Willis, was the first speaker and he gave the roadsters of Ohio to understand that he was their ally and supporter because he considers highway development the principal practical civilizing influence that we have before us at the present time. He spoke of his personal inspection of Ohio roads, and the insistent need of more and more miles to be built within the money possibilities of the people of Ohio. The only plan to eliminate the tendency of city folk to crowd into the city was to extend the roads out to the country so that farmers can have the advantages of city conditions and live in contact with city improvements. The governor beautifully sketched the track of civilization over the roads of the early empires at the cradle of the human race down to our modern type of civilization, and said that the most civilized and the happiest people were always those that had an adequate mileage of good roads. He dwelt upon the economical principle of cost, which always attends such human undertakings, and declared that some way has to be found whereby adequate mileage can be provided for the money obtainable for such purposes.

Fred K. Irvine, editor of *ROCK PRODUCTS AND BUILDING MATERIALS*, spoke of the importance of the quarry industry and its relation to the total wealth of the commonwealth and nation. Touching upon the military and war value of roads which are equally valuable in time of peace, the connection was made with the present movement in the direction of military preparedness. The value of rock deposits in Ohio was brought out as a greater asset to all of the people than many other types of mineral wealth which are often held in too high esteem in comparison. He commended the co-operation that exists between the State Highway Department and the intelligent organization of the Interstate Stone Manufacturers' Association, and showed that harmony and co-operation has always been the means of accomplishing the benefits most needed by humanity in the progress of civilization.

Clinton Cowen, State Highway Commissioner, was the next speaker, and his talk was full of good things because he said that he believed that he was the only man in the world that Jesse Taylor was a little afraid of, and promptly admitted "but not very much." He cracked some good Irish jokes, more or less related to road construction, and finished his remarks with an appeal to the stone manufacturers to make their standard product the best that could be secured, because the object and purpose of the state highway department was to give all the people just as much good road of the highest possible quality that their money would buy.

Ralph D. Cole, eminent republican politician, was the last speaker, who responded to the toast of "Roads Everywhere." Mr. Cole is one of the greatest of living orators, and he beautifully pictured his own experience in boyhood days at road building in north-central Ohio, and about the effect of good roads in comparison to the lack of good roads in the ordinary avocations of life, including that most beautiful of all and ever attractive sentiment the sweet story of the young lover. Reviewing the great stragetic road operations of Caesar and Napoleon he developed the importance of roads

and their influence in the intimate connection of life, making conditions easier, sweeter and pleasanter. The speaker paid a tribute to the splendid information displayed in the afternoon meeting, and said that such information should be made a part of the equipment of all the road authorities of the state, for he did not believe that the average county trustee had any real knowledge of the requirements of good road construction. In conclusion he advocated the broadest application of federal aid and state aid to the biggest possible money appropriation of local communities for obtaining the sinews of war with which to increase the mileage of good and dependable roads, for military purposes, for the economical value of private transportation whether by motor or animal-drawn vehicles, as well as for the personal comfort which makes a bigger and better citizen out of each individual. The whole speech was an impromptu gem, loaded with graceful metaphor while it bristled with facts and purpose.

Of the foot races that took place on the Chittenden race track, and the gossip of the lobby and the delightful good fellowship which pervaded the occasion there are no words at this writers' command capable of making a picture that would express the good will, confidence and mutual appreciation that pervaded the pleasant gathering of bright business men.

FORM NEW CRUSHED STONE ASSOCIATION.

Milwaukee, Wis., Jan. 21.—The Wisconsin Crushed Stone Association was launched at a meeting held at the Hotel Pfister in Milwaukee last week, when all but four of the concerns operating in this state affiliated with the new organization. The association has filed articles of incorporation with L. D. Smith, A. J. Blair and Willet M. Spooner as the incorporators. Offices will be opened in the First National Bank building in this city.

A. J. Blair, Milwaukee, was elected president of the new association and J. J. Sloan, Red Granite, Wis., vice-president. Leatham D. Smith, Sturgeon Bay, is secretary and treasurer. The directors elected are: A. L. Story, Milwaukee; Herman A. Martens, Mayville; John D. Ohrt, Lannon; John J. Sloan, Red Granite and Leatham D. Smith, Sturgeon Bay.

The new Wisconsin association will work for a higher standard of the quality of stone used for public improvements, especially in road building. "We propose to develop and build up good roads in Wisconsin, to aid public officials and to give 100 cents value for every dollar expended," said John J. Sloan, Red Granite, vice-president of the new association. "We expect to make the organization permanent and to maintain offices and headquarters in Milwaukee."

The meeting was attended by many of the best posted road experts in the country.

RICHEY BUYS STONE PLANT.

C. A. Richey, who is now operating five sand and gravel plants at Louisville and Fremont, Neb., under the name of the Richey Sand Co., of Omaha, has just bought the quarry and crushing plant of the Van Court Stone Co. at Nebawka, Neb., which is located on the Missouri Pacific tracks. The plant consists of two stone quarries, two No. 7½ and two smaller Gates crushers, and has at present a capacity of 1,000 tons daily. Mr. Richey is equipping the plant with two 60-horsepower oil engines and will use that fuel instead of coal in the future. The plant will make its own electricity for supplying the air and power necessary in drilling operations.

D. A. Johnson, who has been manager of the plant for a number of years, will continue in that capacity under the title of manager of the stone department of the Richey Sand Co.

Mr. Richey stated that he is able to keep his men going eight months out of the year and that the season just passed proved to be a good one. Prices were reported as being fair.

BIG ORDERS FOR EARLY SPRING.

Pittsburgh, Pa., Jan. 21.—Stone men believe that business in 1916 will be far and away the best that it has been since 1907. So much work is going to be undertaken by the railroads that there is little doubt but that big orders will be placed early in the spring. Bridge work all through Tri-State territory is coming up in a way that shows a splendid prospect for spring and summer business in such stone.

The business of the Statler Concrete Stone Co., located on south Buckeye street, Wooster, Ohio, and the concrete block and products business of the Central Construction Co., of the same place, have been consolidated and the business will be conducted under the name of the Wooster Concrete Stone Co. The office of the new concern will be with the Central Construction Co. in the old Quiney building at Wooster, Ohio.

The Holran Stone Co., of Fostoria, Ohio, has started improvements on its plant at Maple Grove, near that place, to cost about \$75,000.

The Bessemer Limestone Co. is installing a new gyratory limestone crusher to cost about \$5,000 at Youngstown, Ohio. This will be the largest crusher ever put in the Youngstown district and will handle stone five feet in diameter. The Bessemer company is now shipping crushed stone at the rate of 60,000 tons a month.

QUARRY FIRM SELLS PROPERTY.

Trenton, Mich., Jan. 18.—One mile of Detroit River frontage, 436 acres, fifty residences, a large brickyard, a dairy farm and a general store building are involved in the sale by the Church Quarry Co., and the Church Brick Co., of Sibley, of their properties to the Kirby, Sorge-Felske Co., of Detroit, for \$250,000 cash. The transaction is the largest recorded in that section of suburban Detroit for many years. The Kirby, Sorge-Felske Co. plans to expend a huge sum of money in improving the property as a manufacturing and residential district. Extensive development of the property's deep water frontage is also contemplated.

The tract includes virtually the entire business section of Sibley village with the exception of the Church quarry, which some time ago was purchased by the Solvay Process Co., because of its large limestone deposits. Two street car lines and the Michigan Central and Lake Shore railroads serve the district. The property is fifteen miles southwest of Detroit, between Wyandotte and Trenton. The Pennsylvania Salt Co. is adjacent to the village, as are other large manufacturing establishments.

RAINS AFFECT CRUSHED ROCK DEMAND.

San Francisco, Cal., Jan. 18.—The crushed rock business has been rather quiet the last couple of months, as road work, which was taking the principal tonnage, is largely stopped during the rains. An early resumption is expected, however; and it is believed that a feature of the year's operations will be the reballasting of the Southern Pacific Railroad tracks on the Coast division, which has already been delayed two years.

The Temescal Rock Co., of Los Angeles, has secured permission to sell an additional 560 shares of preferred stock at par for cash, to provide working capital and make needed improvements in the plant. The company had previously disposed of 2,640 shares, and considerable remodeling has been done.

The Lippman-Schneider Stone Co., Milwaukee, Wis., capital, \$25,000; incorporators: Walter E. Lippman, Louis Schneider and Frank Schneider.

The Helmer Milling Co., of Fond du Lac, Wis., which recently completed the erection of a modern crushed stone elevator, has moved its main offices into new and larger quarters adjoining its new elevator.

Indiana Roadsters' Annual at Indianapolis

The annual convention of the Indiana Crushed Stone Association was held at the Claypool Hotel, Indianapolis, Jan. 13 and 14 with a very large attendance of the crusher interests of the state represented and participating in the meeting. In fact, upon the receipt of several telegrams cordially supporting the work of the organization and regretting physical disabilities from participating personally in the proceedings, very near to 100 per cent of the crushed rock production of Indiana was assembled there, and the social features of the occasion were all that could be desired.

This organization has been doing a whole lot of sensible, businesslike promotion of the practical good roads development in the state of Indiana. While primarily convinced that macadam roads mean more miles of good roads, they are broadminded enough to recognize the fact that Indiana needs every possible mile of good roads that she will ever get of whatever type they may be. In the application of the tax dollar to road improvement they believe in giving good measure and the people the biggest return that their money will buy.

The rock resources of Indiana are second to none as a road-building proposition, and the distribution of the same extends to practically every nook and corner of the state. The progress already made, and the growing interest in the road proposition is one that can never be stopped until the state is provided with the best obtainable system of roads.

One whole session was taken up with the discussion of standard road specifications of the various types most available for construction in the state of Indiana. Only slight changes were found necessary in any of the standard specifications already recommended and as practiced in Indiana.

The association adopted the same sizes of the crusher product which have been adopted in Ohio by the state highway commission and the crusher interests co-operatively. The operation of these standards has been found in practice to be of enormous benefit to the contractors and of great convenience to the crusher operators. The Highway Commissioner of Ohio has given his full approval of the system, because it simplified the matter of specifications, saving delay as well as the cost and inconvenience of rejections of shipments.

This same system being adopted in Indiana will introduce the same benefits of simpler specifications, and for ordering material merely by the standard number of the goods, which will be understood by all parties concerned, including the engineer, the road contractor and the man who produces the materials. The sizes adopted are as follows:

Standard Sizes of Road Material.

No. 1.—2½ to 4 inches—Material passing through a four-inch and retained on a two and one-half-inch opening; No. 1 size for stone with an abrasion loss of less than six per cent shall consist of material passing through a three and one-half-inch and retained on a two-inch round opening.

No. 2.—1½ to 2½ inches—Material passing through a two and one-half-inch and retained on a one and one-half-inch opening.

No. 3.—Three-quarters to one and one-half inches—Material passing through a one and one-half-inch and retained on a three-quarters-inch opening.

No. 4.—One-quarter to three-quarter inches—Material passing through three-quarter-inch opening and retained on a one-quarter-inch opening.

No. 5.—Three-quarters to zero inches—Material passing through a three-quarter-inch opening and contains the dust.

No. 6.—One-half to one-quarter inches—Special size—Material passing through a half-inch and retained on a quarter-inch opening. Note.—This size can only be produced under the most favorable operating conditions.

No. 7.—One-quarter to zero inches—Material

passing through a quarter-inch opening and contains the dust.

The estimated expenses of the promotion work for the coming year were carefully estimated and the amount promptly subscribed. It was a harmonious conclave of boosters who believe in the principles of co-operation and reciprocity, and are building their business and future progress along these enlightened lines.

The annual election resulted in the following selections: President, E. B. Taylor, Greencastle, Ind.; vice-president, E. T. Milligan, Muncie, Ind.; treasurer, V. G. Pogue, Indianapolis, Ind.; secretary, Fred W. Connell, Indianapolis, Ind.; directors, O. H. Binns, Logansport, Ind.; and L. H. Hawblitz, Toledo, Ohio.

A. B. Meyer, in an earnest little speech, congratulated the retiring officers of the association upon the good work that they had done, and proposed a vote of thanks, which was unanimously carried.



FRED W. CONNELL.

General appreciation was expressed, particularly for the intelligent and active conduct of the secretary's office by Fred W. Connell, the re-elected secretary, who was handed a posey by unanimous consent.

The meeting then adjourned with renewed confidence in the objects, aims and efforts of the organization.

The Annual Banquet.

Along about seven o'clock, according to previous announcement, the annual banquet was held in the Florentine room, the meeting place of many festive occasions. It was some banquet, for the chef of the famous hostelry did himself proud with every number of the splendid menu, which left nothing wanted, either in the eats or drinks. It was a happy get-together occasion organized by President E. B. Taylor with the assistance of Secretary Connell. Fred K. Irvine was called upon to act as impromptu toast-master, and the speakers contributed a feast of intellectual good things, enjoyed quite as much as that which the excellent service afforded.

The Hon. Edward Barrett, state geologist, talked upon the subject, "Why Macadam Roads." In a very instructive way he briefly outlined from an imaginary map of the state the wonderful rock deposits of Indiana, all of which are applicable to road construction, convincing us that the good Lord

had made plentiful provision in the construction of the state, and that it was up to the people to use the splendid rock metal available for their own comfort and profit. Mr. Barrett considers good roads the most important and profitable investment that the state can secure from this great natural resource.

"Macadam Highways" was the topic handled by Mr. Charles A. Carruth, of Rochester, N. Y., an engineer of the New York State Highway Department. He described the plan in detail, of the splendid road system that has been worked out in Monroe County, N. Y., and dwelt upon the feature of maintenance which is not the least of importance in retaining the enthusiasm of taxpayers who have contributed to the construction of good roads.

P. P. Sharpless, of the Barrett Manufacturing Co., New York, was expected to tell about his interesting trip to Trinidad, where the asphalt comes from, but instead of that he talked about quality, mileage and the need of giving the people their money's worth in order to keep the road movement growing in a manner of first interest to every community.

A. B. Meyer spoke of the road movement in Indiana, and how that everybody recognized the indispensable character of road work to the future development of the state. A firm supporter of the co-operative principle in doing business, he is always to be counted on as one of the leaders in such undertakings.

Charles L. Ireland, of Van Wert, Ohio, a distinguished visitor, told his experience as a crusher operator and road contractor. Having seen the road building game from both of these viewpoints for many years, Mr. Ireland expressed the need of producing exactly the material that is wanted and of maintaining a service that is comfortable and accommodating to the contractors in the actual road operation. He mentioned the tremendous improvement of equipment that has simplified the quarrying and crushing operations that has made it possible in these times of short labor and ever-increasing labor cost.

Secretary Connell briefly outlined the work of the secretary's office, the kind of co-operation from the members that will make the same most efficient and bring about the best results.

President Taylor read several telegrams from absent members and friends, and that from Oscar Binns was received with applause, for he is universally popular in all connections.

B. M. Smith, from the Chicago office of the Barrett Manufacturing Co., told about the recent organization of road builders in Wisconsin, and stated that the work of the Indiana Association was recognized as being beneficial to the whole road movement throughout the state, and worthy of the support of every road enthusiast in Indiana.

C. W. Kelley, secretary of the Indiana Contractors' Association, made some cordial and fraternal remarks pledging the co-operation of the leading contractors of Indiana with the work of the association.

Interspersed between the progress of these good business talks, in every one of which there was a kernel of meat, the orchestra played popular airs, and a singing comedienne who was about as sweet as a peach, sang some fetching ditties. She kissed Ed Milligan on his bald spot, pinched Ed Taylor's ear, and sat in Ed Baltes' lap. Then there were three harmony girls who sang and made eyes at Will Foreman and Gene Ireland until they blushed red to the ears. But when the whole quartette sang, "I Can't Do Without You," Charley Spensley, Charlie McKee, and R. E. Greenley got all the attention, and consequently all the jealous honors of the bunch.

The musical program was a great success and contributed much to a very pleasant and entertaining occasion.

Are you a member of the Bourse Family?

Quarry Pumping Problem Economically Solved

Beginning last spring, from 90 to 100 days of almost continuous rainfall have been recorded in the chronicles of many crusher plants, for we have seen the reports from a very large percentage of the crushed rock capacity of the middle west on this extremely forceful visitation. The pumping operations that relieve a very large number of the plants may never be written into a readable story, but all who are acquainted with this condition of 1915 will know what we are discussing when we refer to the recent wetness. It will be recalled that during the first half of July there was a torrential downpour, amounting to a cloudburst condition, that extended all the way from Texas and the gulf up the Mississippi valley and spent itself in the region of the Great Lakes.

Now, just about this time the quarry of the McLaughlin Cook Co., at Kankakee, Ill., was flooded and we have taken it as a type of what obtained at that time as to the operations of a rock crusher plant and the value of a quarry operation. The quarry measures about 600 feet in one diameter and 300 feet in another in the form of an irregular ellipse and the bottom floor of the quarry pit is 90 feet below the first stone surface.

When the July cloudburst came along, the McLaughlin Cook Co. found its quarry full of water, which has been estimated at the enormous sum total of 135,000,000 gallons. Not far from the plant there rolls a little brooklet, or drainage ditch, which relieves the upper levels of the surrounding country of its surplus water and it was in all respects adequate to the ordinary demands that nature might make upon it. This little brook is crossed at several places by means of permanent concrete bridges having arches well calculated to carry more than 50 per cent of natural expectations with regard to water loads.

This brook or ditch had been carefully revented so as to prevent its overflow from doing any serious damage to the quarry, but when the cloudburst con-

ditions came after a long sustained condition of excessive precipitation the stream overflowed its banks and then washed the entire overload of soil and dirt into the quarry and filled it up to the brim. The company called the matter to the attention of a large number of experienced quarrymen, who for the most part were convinced that it would be useless to attempt to remove the water because of the



E. C. GRAVES.

fact that seepage troubles had always been known to the quarry property since it was first opened a number of years ago.

There was gloom at Kankakee and little hope of relief appeared anywhere until E. C. Graves, who has been identified with heavy engineering and excavation difficulty for years, estimated the dimensions of the tasks of removing the water and offered to proceed to demonstrate that within a fixed sum he could pump out the water and leave the quarry operations in practical shape. He came to Chicago and got a pair of the American Well Works eighty-ten-inch centrifugal pumps and got two 100-horsepower electric motors, one a Westinghouse, the other a Fairbanks-Morse. The pumps were mounted on heavy timbers and placed on the quarry incline. The company's crane was rigged so as to suspend the anchorage of the pump, using the cables which connected with the hoisting drum used in the crushing plant to haul up the quarry cars for feeding the initial crusher.

The pumps so placed were run until a sufficient amount of water was drawn out to allow another coupling of pipe to be added; then the pump and motors were lowered and the operation repeated. The water was discharged through a ten-inch spiral riveted pipe into a large tank which was connected with an improvised flume which delivered the waste water into the creek that had caused the damage in the first place. In 17 days the quarry was emptied.

The revented dyke, about 125 feet long, that was washed into the quarry, was at the beginning of the pumping operations seven feet under water. Wooden forms were placed across this gap for the purpose of making a concrete retaining wall. The forms being set in the water and held in place by means of rubble stone; heavy timbers were used to extend the forms the entire length of the opening. Across the timbers on top of the concrete forms a wagon way was made to dump in filler dirt so that when the water was pumped it left the forms on the dry side from which the rubble was afterwards removed

and the forms refilled with concrete. On twelve-foot centers throughout this retaining wall, seven-inch stovepipe extending seven feet to the rock below was placed in the concrete vertically so that when the concrete had set, through the holes left in the pipe, the well driller could proceed to drill down through the concrete and into the rock below to make anchors of old rails and concrete. This idea was originated to take care of the special needs of this particular job and it worked out to perfection.

In placing the concrete retaining wall the course of the creek was straightened so that it is now in a position to carry off the water better than it was before.

A Keystone excavator was employed for the purpose of handling the rich black dirt that had been washed into the quarry as well as that which had to be moved in connection with the concrete work. The process of removing the dirt from the quarry has proceeded with excellent dispatch and a ready market is being found for all of this black dirt at a price that very nearly pays for the handling of the same.

The crushing plant of the McLaughlin Cook Co. is a very good one, being equipped with Austin crushers, its No. 7½ being used for the initial crushing and two No. 5's and two No. 4's being employed in the re-crushing operation. The plant is electrically driven throughout and has an average capacity of 700 cubic yards per ten-hour day.

One of the accompanying illustrations show the seepage openings which have been somewhat of a problem in the past operations of this quarry. This is evidenced by the pipes leading down to the pump pit. Mr. Graves, who has since the achievement of this wonderful pumping outfit, been elected vice-president and general manager of the company, has decided to undertake the calking of this seepage seam which does not occur anywhere else in the quarry premises. Having seen something of this nature brought to perfection in connection with the engineering work in the canal at Sault Ste. Marie he is convinced that his plans are going to be successful in this connection also.

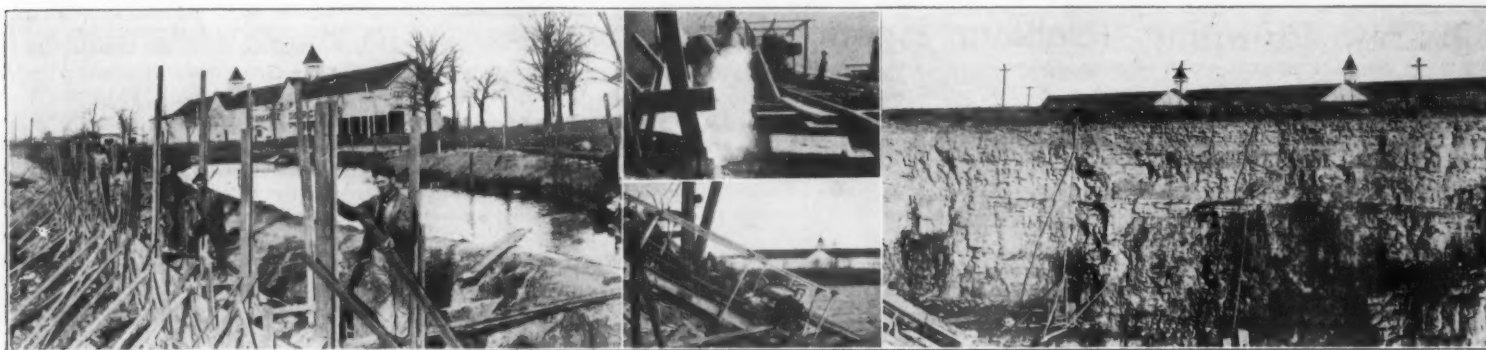
Arrangements are being made to put in a long



WATER AT ITS HEIGHT.



RESULT OF TEN DAYS' PUMPING.



DETAILS OF THE WORK OF PUMPING OUT AND PROTECTING KANKAKEE QUARRY.

spur track for the storage of crushed rock in piles, so as to be prepared for immediate delivery in very large quantities in such amounts as can only be taken from quarries. His plan is to fill side dump cars of material and run them out to the stock piles to unload. His Keystone excavator, will be used out at the stock piles for the purpose of loading contractors' wagons as well as carload deliveries when occasion requires.

This exceedingly difficult pumping problem, having been overcome as described in these words and shown in the illustrations, may be taken as a profitable suggestion to many others whose quarry properties at this time are questionable by reason of an overload of water.

We would conclude from the testimony that Mr. Graves has given us that it would be exceedingly difficult to find a water problem that could not be promptly disposed of if it were only tackled in an intelligent and enthusiastic manner.

Echoes from the Quarries.

The Sussex Limestone Products Co., a New York corporation, has been authorized to do business in New Jersey. It is represented in that state by Leonard B. Smith, Franklin Furnace, N. J.

Samples from the limestone deposits of Polk county, Ore., are being analyzed by men located in Portland, Ore., prominent among whom is Col. B. K. Lawson, former warden of the state penitentiary. The plan of pulverizing the product for agricultural purposes is believed feasible.

The Pittsburgh Limestone Co., Pittsburgh, Pa., will develop limestone deposits in recently acquired property near Williamsport, Md.

The Kennedy-Refractories Co. has been incorporated with a capital of \$100,000 by H. A. Kennedy, Clearfield, Pa., for the purpose of operating a limestone quarry.

Fire destroyed a part of the motor and machinery equipment of the Leeds Crushed Rock Co., Twenty-

ninth and Cole streets, Kansas City, Mo., early on the morning of Dec. 28. The entire loss is less than \$1,000.

The Webster Stone Co., of Irvington, Ky., is receiving numerous orders for ground limestone for agricultural purposes, besides numerous orders for crushed stone to be used in road building. The company has more than 100 cars booked for future delivery in various parts of the state.

The Limestone Products Co., of Chattanooga, Tenn., lost its suit to prevent the Wauhatchie Pike Commission from condemning a right-of-way through its property. The quarry company contended that the county had already secured one right-of-way and that additional property could not be condemned in order to change the route. The circuit court declared that the right of the county court to condemn property could not be questioned by judicial review, except in the case of a showing of oppression. The company previously wanted damages of \$20,000 from the county.

The Lawrence Stone-Block Co. has been organized at New Castle, Pa., by C. E. Kimbrough, B. C. Baker and W. L. Aiken.

The Keystone Limestone Co., New Castle, Pa., capital, \$60,000; organized by D. H. Kay, James C. Patterson, and Judson C. King.

The Blue Ridge Lime & Stone Co., Pittsburgh, Pa., capital, \$10,000, has been organized and will have its chief quarries at Millville, W. Va. A West Virginia charter was taken out recently by the following incorporators: David A. Rees, Thomas X. Morris and W. B. M. Morris, of Pittsburgh; Frank M. Rees and C. E. Tipton, of Millville, W. Va.

William Gerhart, owner of a stone quarry located along the Lebanon Valley Railroad, near Wernersville, recently refused a bid of \$3,775 for his property. The quarry has been fully equipped with modern machinery and is known as one of the best in the country and has been operating to capacity of recent date. On the property are three new lime-kilns, each of 1,000-bushel capacity, a ten-ton

scale, engine house, tool house, stone crusher, crusher bin of 100-ton capacity, twenty horsepower gasoline engine, large new Holland stone crusher with rollers attached, a 30-foot elevator and a 14-foot screen. The quarry covers three acres, has a breast 50 feet in height and 270 feet deep and contains solid limestone rock of the best quality.

Farmers' Ground Limestone Co., Richmond, Ind., has increased its capital stock from \$25,000 to \$50,000.

A stone quarry and 40-acre tract of land of Askeaton, Wis., have been purchased by John Brooks & Sons, who plan to produce crushed stone.

Provincial Stone & Supply Co., Toronto, Canada, capital \$40,000; to carry on the business of quarry masters and stone merchants.

Statistics compiled by Geo. A. McNamee, secretary-treasurer of the third Canadian and International Good Roads congress, to be held at Montreal, March 6 to 10, inclusive, show that at least \$15,000,000 will be under appropriation this year for the construction or improvement of roads throughout Canada.

HIGHLY SUCCESSFUL BLAST.

Nashville, Tenn., Jan. 18.—Foster & Creighton, contractors and quarry operators, received word, Jan. 15, of a highly successful blast made at their quarry at Rockwood, Ala. The face of the quarry was ninety feet deep and holes were drilled to the bottom with a Keystone well drill, operated by steam. The area covered was about 188 feet across, the distance between outside holes being 168 feet, with the end of the quarry ten feet from the outside holes. The shot was arranged to cut forty feet from the bluff. There was a four-foot overburden on the quarry, but instead of stripping this first, the deep holes were drilled through, while shallow holes were drilled over the entire area to be shot. These were loaded separately and lightly. Both the top dirt and the rock were shot on the same discharge, however, the current being taken from a dynamo used for lighting the crusher and grounds. The dynamo was three-quarters of a mile away.

The officials state that with the "kick" the overburden had from the solid rock, it was thrown completely away. The shot brought down 36,000 cubic yards of rock, seventy-five per cent of which was ready for the crusher. The remainder will be broken up with Chicago pneumatic jack-hammers. It is estimated that it will require three months to feed this through the crusher. Fifteen days were required for the drilling and two and one-half days for loading, forty per cent dynamite being used. This stone will be used for road and concrete work, government revetment work and fluxing stone.

The Lightman Stone Co. suffered from the recent high stage of the Cumberland river, its city yards contained a lake of considerable size as the result of back water. For several days teams could not reach the crushed stone pile and other means had to be devised for storing material.



CLOUDBURST FILLED BOTTOM OF QUARRY WITH BLACK LOAM FROM DIKE AND BED OF STREAM.

SAND and GRAVEL

NEW SAND AND GRAVEL INCORPORATIONS.

Dixie Gravel Co., Hattiesburg, Miss.; capital, \$10,000; officers, I. V. Austin, president; N. R. Racket, vice-president, and H. F. Wheeler, secretary. The company has purchased a sixty-acre site at Rawles Springs, Miss., and will develop sand and gravel for the manufacture of brick and tile.

Ottawa Washed Sand & Gravel Co., Ottawa, Ill.; capital, \$10,000; incorporators, H. C. Wiley, M. D. Moran and Helen Stephens, all of Ottawa.

Southwestern Gravel Co., Ardmore, Okla.; capital, \$50,000; incorporators, James A. Cotner, Ardmore; A. H. Cotner and George Cotner, Colorado Springs, Colo.

Jones-Fisher Sand & Gravel Co., Franklin, Pa.; capital, \$30,000; directors, William C. Fisher, George H. Jones, Harrah R. Fisher, William M. Fisher and William H. Forbes.

Westmoreland Sand Co., Wilmerding, Pa.; capital, \$15,000; directors, Frank S. Klaus, George B. Synder, Y. A. Gilmartin, H. B. Christopher and G. B. Doak.

The Lafayette Hydraulic Gravel Co., Lafayette, Ind.; capital, \$60,000; incorporated for the purpose of mining and dealing in sand, gravel and crushed stone; the directors, Lydia Duncan, F. Lee Duncan, Mary S. Dunavan and Elias H. Dunavan.

Arundel Sand & Gravel Co., Baltimore, Md., has increased its capital stock from \$2,000,000 to \$3,250,000.

Worcester Sand & Gravel Co., Worcester, Mass.; capital, \$10,000; incorporators, Florence Bennett and Charles H. Neale.

B. B. Taylor & Co., Macon, Ga.; capital, \$5,000; deal in sand and gravel. B. B. Taylor and others.

Hazen and Co., Bangor, Pa.; capital, \$10,000; directors, Daniel J. Miller, Charles N. Miller, Herbert C. Dilliard.

Saluda River Sand Co., Greenville, S. C.; capital, \$5,000; incorporators, C. S. Allen and M. J. Calhoun.

New York Blackstone Co., Inc., Kingston, N. Y.; capital, \$100,000; to deal in sand and gravel; incorporators, Gordon Reel, Peter H. Troy and Frank B. Lown.

Citizens Sand & Gravel Co., Toledo, Ohio, has increased its capital from \$15,000 to \$45,000.

American Silica Sand & Mining Co., Herculaneum, Mo.; capital, \$15,000; officers, George D. DuBuchanne, president and manager; H. D. Evans, vice-president, and J. B. DuBuchanne, secretary-treasurer.

The Atlanta Sand Co., Erie, Pa.; capital, \$10,000; incorporators, F. B. Downing, H. K. Blake, W. L. Scott and Mr. Thompson of Erie, Pa.

Southern Silica Products Co., Treessville, Ala.; capital, \$50,000; officers, Robert J. Kerr, president and treasurer; O. W. Underwood, Jr., secretary, and E. F. Rarebeck, vice-president.

The Ohio-Pennsylvania Sand & Gravel Co., New Comerstown, Ohio, capital, \$25,000, has been organized by capitalists of that city.

The Westmoreland Sand Co., Wilmerding, an east end suburb of Pittsburgh, Pa., capital, \$15,000; incorporators: T. A. Gilmartin, Frank A. Klaus, G. B. Snyder, Wilmerding; H. B. Christopher, Turtle Creek, and G. B. Doak, Rankin, Pa.

Quality Sand & Gravel Co., San Francisco, Cal., capital \$125,000; incorporators, G. P. Neuwald, J. G. Leeper and H. Jackson.

Modern Washing and Crushing

For the purpose of expanding and extending its activities and increasing its usefulness as a sand and gravel producing institution, the Wiggim Crushed Stone & Sand Co., of Germantown, Ohio, has increased its capital stock from \$65,000 to \$200,000. This additional capital will enable the company to erect a sand and gravel washing plant at Fort Jefferson, Ohio, where the proposed construction of a conservation dam will call for a great amount of concrete material. An option already has been taken on a tract of land at Fort Jefferson, which lies in the Greenville, Ohio, district.

In the construction of the Fort Jefferson plant, the company will use some of the machinery now at Germantown, but the greater part of the equipment will consist of new machinery.

The present Wiggim plant is located about twelve miles below Dayton, on the Cincinnati & Northern branch of the Big Four railroad, where the company owns fifty acres of gravel land, which average a depth of seventy-two feet, the material running from a very fine quality of brick, or mason sand, to all sizes of gravel and boulders as large as twenty inches in diameter.

An up-to-date washing and crushing plant has been installed at Germantown and adequate storage bins have been built of concrete. The washing compartment occupies the upper section of a building, thirty by sixty feet, and is located directly over the storage bins. The power house and crusher building, thirty by ninety feet, is connected with this structure and in close range of the gravel pit.

Six crushers are being operated at this plant, and with their assistance the company has been enabled to secure a capacity of from fifteen to eighteen cars of crushed boulders per day. In addition to this an average of twenty-five carloads of sand and gravel is shipped daily. The plant consists of one No. 7½ Austin, one No. 5 McCulley, one thirty-six inch Symons, one twenty-four inch Symons and two eighteen inch Symons crushers.

This plant was designed and built under the supervision of H. S. Anderson, who has had considerable experience in the crushing field. Since 1892 he has been constantly at work either crushing stone or gravel. Twenty-four years ago he entered the employ of Col. Daniel Donnelly, of Cincinnati, as an assistant in a limestone quarry. He helped the

Colonel in constructing the first washing plant in the southern part of Ohio, Donnelly being the pioneer in this business in the Cincinnati district. He is at present operating two large plants near Cincinnati, namely the Miami Stone & Gravel Co., on the B. & O., and the Ohio Ballast Co., on the N. & W.

The Wiggim plant is being operated under a patented process for washing crushed boulders. A special screen is also used in connection with this process. These have been designed by Mr. Anderson, for which he now has patent rights.

Officers of the company are: E. H. Wiggim, president and treasurer; Frank Tejan, vice-president; H. H. Maxon, secretary, and H. S. Anderson, general manager.

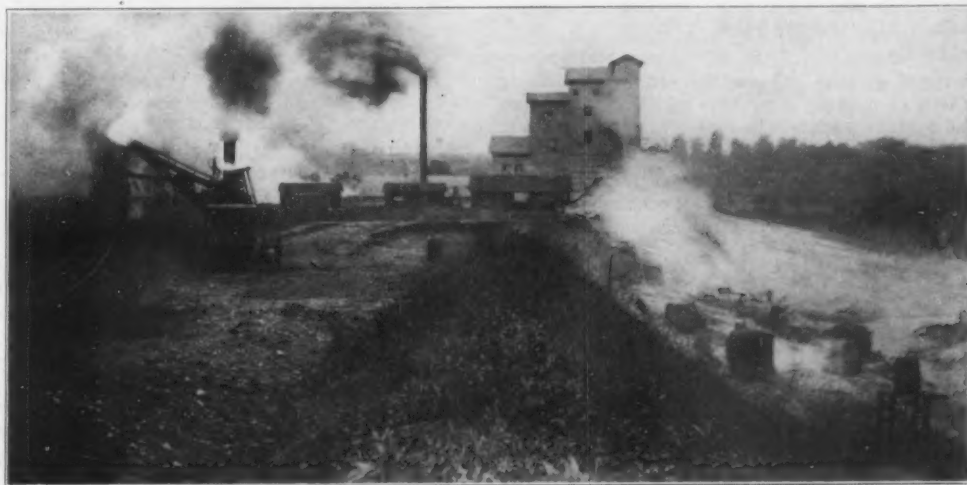
LARGE ORDER FOR SAND AND GRAVEL.

The Wheeling Wall Plaster Co., manufacturer and distributor of gypsum products and building material, with headquarters at Wheeling, W. Va., recently secured an order for sand and gravel calling for approximately 120,000 tons. This is stated to be one of the largest orders for such material ever entered in that section of the country. The material is to be used in the construction of a \$2,500,000 power plant at Beech Bottom, a suburb of Wheeling, which is being built by the Foundation Co. of New York City, for the American Gas & Electric Co. The sand dredge "Wheeling," which is one of the largest and finest equipped in the Ohio river, is now on the job digging sand and gravel for this work.

It is expected that the erection of the power plant will induce a number of manufacturing concerns to locate in the vicinity of Wheeling, which is located right in the heart of the best and cheapest coal, oil and gas, besides having a large acreage of land at a reasonable cost which can be utilized for manufacturing sites to advantage.

SAND-PRODUCTION STOPPED BY COLD.

Kansas City, Mo., Jan. 18.—A temperature of fourteen degrees below zero Jan. 13 stopped sand-production at Kansas City. The Missouri river and the Kaw were frozen over. Companies had fair supplies on hand, however, quit sufficient to care for the immediate needs of contractors engaged on inside work where cold would not interfere with operations. The outlook for the year is excellent, and with spring will undoubtedly come large demands.



WIGGIM CRUSHED STONE AND SAND CO.'S OPERATIONS AT GERMANTOWN, OHIO.

CLAY PRODUCTS

Activities of the Clay Field

The Dubois Clay Manufacturing Co., Dubois, Pa., capital, \$16,000; incorporators: S. J. Schrecongust, A. S. Moulthrop and H. B. Boner.

The Fallston Fire Clay Co., of Fallston, Pa., has started work on an addition which will give it a capacity of 20,000,000 brick a year. Nearby, the plant of the Beaver Clay Co., at New Galilee, is building an addition to give it a capacity of 36,000,000 building brick a year. At Eastville, in the same locality, the Fire & Fire Brick Co., which was owned by the Dempster Estate at Pittsburgh, has been sold to the Fallston Fire Clay Co., which will make extensive improvements to the plant.

Casper P. Mayer, a veteran brick-maker and builders' supply man of Bridgeville, Pa., is working hard for the interests of the National Paving Brick Manufacturers' Association this year. He is also one of the most aggressive figures in the Retail Lumber Dealers' Association of Pennsylvania and always has something to say to the point when he gets on his feet.

The Bickford Fire Clay Co., which is now operating at Curwensville, Pa., has bought the clay in the Draucker & Ogden farms near that place and also the surface rights. The company is arranging to build a large sized plant about three miles east of Luthersburg, Pa. Its present plant employs about 500 men.

Eastern capitalists have recently visited Franklin Furnace, Pa., and it is reported, are arranging to build a big brick plant near that town. Some of the finest deposits of clay in the state are found at that place.

The Joseph Soisson Fire Brick Co., of Connellsville, Pa., has leased its No. 2 plant at Bolivar, Pa., to the General Refractories Co., of New York, which will utilize it for calcining magnesite, an ore used in the lining of furnaces.

The Acme Brick Co., of Marietta, Ohio, had a very prosperous year in 1915 and recently elected the following officers for this year: E. Clark, Jr., president; A. L. Gracey, vice-president; John Kaiser, secretary; W. H. H. Jett, treasurer and general manager. These, with G. H. Crawford and W. L. Hyde, comprise the directors.

The Glass Brick Co., of Huntington, W. Va., has bought several limestone quarries in eastern Kentucky which it will use to produce raw materials used in the manufacture of its product at Huntington. It is said the company has secured a supply to last it seventy-five years.

At Johnson City, Ohio, seventy-five state prisoners are working and turning out from 20,000 to 25,000 brick every day. It is said that the present lease on the plant will be renewed in March when it expires.

The Harbison-Walker Refractory Co., of Pittsburgh, Pa., has declared its usual quarterly dividend of one and one-half per cent on the preferred stock, payable Jan. 20.

The Municipal Shale Brick Co., composed of Baltimore and New York capitalists, has secured thirty-five acres of land on the Charles Town Road near Martinsburg, W. Va., and will build a mammoth plant to cost about \$100,000,000.

The brick yard and plant of the Evan Jones Co., at Liberty avenue and Thirty-sixth street, Pittsburgh, Pa., was considerably damaged by fire Jan. 5.

The Hay Walker Brick Co., Inc., of Pittsburgh, Pa., has been incorporated also under New York

laws, with a capital of \$100,000, by the following eastern capitalists: R. L. Findlay, 470 Fourth avenue, New York City; A. A. Ayers, 925 Jefferson avenue, Brooklyn, N. Y., and W. C. Black, Rutherford, New Jersey.

The Bradford, Minghampton and Youngsville, Pa., plants of the Foster Brick Co., were sold at bankruptcy sale Dec. 28 to S. A. Munday, of Bradford, Pa., for \$45,000.

J. Murray Thompson, of North Ninth street, Pittsburgh, Pa., has been elected superintendent of the Clymer Brick Co., to succeed George W. Lenkard, who has resigned on account of ill health. Mr. Lenkard has gone South to remain for some time.

The Reynoldsville Brick & Tire Co., of Reynoldsville, Pa., has not only weathered the hard times of the past two years but has also increased its business under the management of Clyde C. Murphy. It has secured many large government contract jobs and at present some big orders are being booked for next summer's delivery. The plant has a capacity of 40,000 brick daily and employs an average of sixty men the year around with a payroll of \$40,000 a year. Three years ago the company bought the plant of the Sykesville Clay Products Co., and have operated the two together since that time.

At Harpersburg, Crawford county, Pa., a very fine deposit of high-grade shale marl has been discovered on the McGuire property. The bed is about ten feet thick and more than fifty acres in extent. The property has been leased to financiers whom, it is said, will equip a big plant there shortly.

The Wyomissing Brick Co., Wyomissing, Pa., capital, \$10,000; organized to mine clay and manufacture brick; incorporators: F. R. Hansel, Philadelphia, Pa.; George H. B. Martin, and S. C. Seymour, Camden, N. J.

Louis N. Romick, a well-known consulting engineer of Baltimore, Md., is engaged in extensive research work for the Maryland Coal Co., near Lonaconing, Md., where it expects to develop fire clay properties shortly.

Two big buildings owned by the James Gardner, Jr., Co., a brick manufacturing concern at Lockport, Pa., were burned recently with a loss of \$10,000. The company has its offices at Bolivar, Pa., and manufactures gas retorts for artificial gas and fire brick and employs thirty men. It will rebuild its plant at once.

The American Silicite Co., which has been incorporated at Anniston, Ala., with a capital of \$25,000, will develop deposits of a mineral called silicite near Anniston for the purpose of manufacturing brick and a high-grade roofing product. Robert H. Zell is president; H. G. Halvossen is secretary and treasurer, and R. L. Zell is superintendent. All the officers are from Birmingham.

The Valley Brick & Tile Co. is the title of a corporation now being organized at Modesto, Cal., for the purpose of making common and face brick. A site has been selected north of Modesto, and W. M. Anderson is named as superintendent. The company is to be capitalized at \$100,000.

W. G. Bush & Co., of Nashville, Tenn., will furnish 1,000,000 brick for the construction of the Tennessee Extract Co.'s plant.

The Domestic Clay Specialty Co., Canton, Ohio; capital \$25,000; to manufacture and handle various clay products, including brick, hollow tile, etc.; incorporators: Wm. C. Marlot, D. W. Alexander, Charles Marlot, F. M. Smith and W. E. McCormish.

Industry on a Better Basis.

Pittsburgh, Pa., Jan. 21.—The brick and clay industry in this district is on a much better basis than a year ago. The year 1915 did not make many brick firms rich. On the contrary paving brick men, especially, had a mighty hard time to make it go. Competition was very keen and there was a much smaller amount of state and county road work done than was anticipated. In building brick the situation was a little better. The prospects, however, are getting better every day for a big season in building brick and plants are being put in shape for a large production in the spring and summer.

The National Fireproofing Co. has completed arrangements for manufacturing a new hollow tile building block. This will give the prospective builder of fire-proof houses the option of using an exterior finish other than stucco. The block will be in gray, brown, red and buff colors and will be either salt glazed or vitrified and absolutely fire-proof. It can be laid about thirty per cent cheaper than brick, it is said.

The Harbison-Walker Refractories Co., of this city, has started to open up 100 acres of coal land at Retort, Pa., and the output will be used exclusively by the Harbison-Walker plants.

Thomas E. Wilson, secretary of the Pittsburgh Clay Products Co., had the following to say about the prospects for the brick business this year: "The prospects for the coming year are excellent. The indications are that 1916 will be a big year for building construction. General business conditions are getting better rapidly and brick will be in demand. We have placed all of our plants in good shape and have added a number of kilns at some in order to be able to meet demands."

The Mount Union Silica Brick Co., and the General Refractories Co., are working more than 600 men, at full time at their quarries near Lewistown, Pa., in getting out pulverizing silica laden rock and making from it hard fire-proof brick from which the steel furnaces are being built. The fire brick industry is being greatly helped now by the boom in the steel business which is causing the erection of so many new steel plants of all kinds.

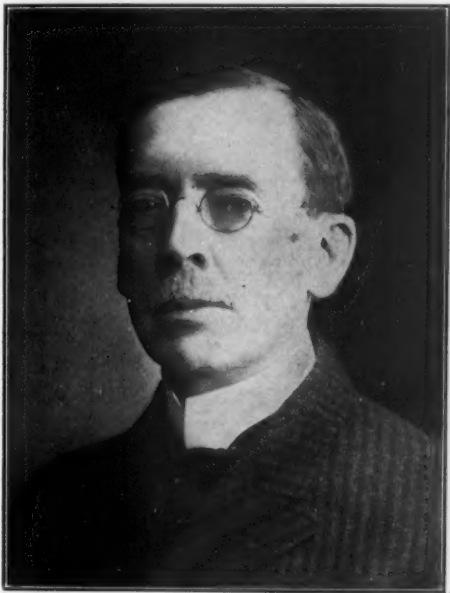
WANTS DAMAGES FOR SEEPAGE.

Chattanooga, Tenn., Jan. 16.—A suit bringing up some interesting points has been filed by the J. W. Wells Brick Co. against the Chattanooga and Tennessee River Power Co., in the Hamilton County Circuit Court. The brick company is suing for \$30,000 as damages as a result of seepage.

Since the power company constructed a dam at Hale's bar, the normal stage of the water has been considerably higher. This has caused overflows at various points, resulting in a number of damage suits against the power company. All of these have been from establishments along the river. The Wells' brick yards are at considerable distance from the river. One of these is inside the city limits and the other at Citico. The increase in the height of the river, it is stated in the petition, has caused the water to seep through the underlying soil, until at the city tract, it is now impossible to excavate more than eighteen feet of clay until the soil is too wet to be used for brick making. At the Citico land, they can go only eighteen feet before reaching wet ground. While each acre should yield 1,000,000 brick, only a small percentage of this is obtained.

Pioneer Dealer Passes.

Frank S. Wright is dead. This announcement will strike sorrow to the hearts of all of the old guard of the builders' supply industry throughout the country, for Mr. Wright was one of the best known and beloved men that has ever occupied a leading position amongst the big dealers in the United States. He has been a very sick man since



THE LATE FRANK S. WRIGHT.

late in the fall when he returned from his summer home at Lake Geneva, and for weeks it has been known that the end was approaching. Death came on January 22. He was born in Milwaukee, July 27, 1846, and came to Chicago when he was a mere boy, and first secured employment as a salt salesman. Very soon thereafter he accepted the agency of a lime concern which brought its product into the city in canal boats and later when cement began to be manufactured at Utica, Ill., he was one of the first to be engaged to sell the product of the famous old Clark mills. Soon the partnership of Meacham and Wright was formed, which existed more than forty years, in which Mr. Wright in company with F. C. Meacham became the leading cement jobbers of the great Chicago market, being the first to import cargo shipments from European mills, of Portland cement. Their operations for more than a quarter of a century were enormous in their proportion, for the firm of Meacham & Wright was identified with the material supply of the rebuilding of Chicago after the great fire. Mr. Wright's description of the great Chicago fire was a magnificent piece of conversational description, being almost poetic in its apostrophe and metaphor as described by a man who himself was caught and trapped within the folds of the raging fire elements. As soon as the fire was over, as he describes it, he made his fortune on horseback, riding from one building job to another to take the orders and check the deliveries. A city was growing as if by magic and he and his partner, Mr. Meacham, were charged with the responsibility of delivering much the major part of the indispensable cement and lime that was demanded without regard to price or quality. In later years the firm has been prominently identified with the distribution and sale of Portland cement in the capacity of dealers and until recent years they were the sole sales agents of Utica hydraulic cement, which was their first and most profitable brand.

For many years Mr. Wright was personally identified with the National Builders' Supply Asso-

ciation and in 1908-1909 was president of that organization. He was one of the organizers of the Royal League and a past supreme officer of that organization. For the last thirty years he and his family have been members of the Lake Geneva summer colony and during recent years Mr. Wright has spent several winter months in Florida to conserve his health. He is survived by four daughters, Mrs. Charles E. Riordan, Mrs. L. H. Sperry, Margery and Dorothy Wright. Funeral services will be held at the family residence January 24th.

James C. Adams Passes Away.

It is with profound sorrow that we record the death of James C. Adams, general sales manager of the United Fuel & Supply Co., Detroit, Mich., on Jan. 9, at Pittsburgh, Pa. He was only forty-four years of age and had been identified with the builders' supply and coal business for twenty-eight years. No man in the trade had a wider acquaintance and he held the respect and esteem of all who knew him.

"Jim" Adams was born in Pittsburgh and was educated in the schools of that city. He went into the employment of the D. J. Kennedy Co., when but sixteen years of age and continued on the connection for more than 23 years, in which his activities and wonderful business ability were recognized. About five years ago he removed to Detroit to become the manager of sales of the Malcolmson Houghton Co. and, at the formation of the United Fuel & Supply Co., became general sales manager of that extensive establishment. He had served for several years as a trustee of the National Builders' Supply Association and had for many years been a prominent and popular worker in that cooperative institution. About the holiday time, Mr. Adams with his family, consisting of his wife, two daughters and one son, went to Pittsburgh, his old home, to spend the holiday season. He was taken with the grippe, which later developed into pneumonia and caused his untimely death.

James C. Adams was a man of high character and of large moral dimension, a true friend, a good hus-



THE LATE JAMES C. ADAMS.

band and father, the kind of a citizen of which our civilization has produced all but too few.

James F. Grimes.

James F. Grimes, one of the really big home builders of Greater Pittsburgh, died a few days ago

at his home in Knoxville, a South Hills suburb, which he had persistently and consistently developed into one of the most beautiful residence places of Pennsylvania. Mr. Grimes began his building operations in the South Hills perhaps fifteen years ago. For many years he was the largest single buyer of building material in that district. He built a uniformly good class of houses, flats and stores and did not sacrifice architectural beauty or landscape variety to impassionate greed for dollars and cents which has been the fault of so many house builders. Mr. Grimes will be greatly missed in builders' supply circles in this city.

Arthur A. Green.

Arthur A. Green, prominent stone quarry operator of Catasauqua, Pa., died recently from pneumonia. He was born in Ulster county, New York, but settled in Northampton some twenty years ago. He assumed charge of the Lawrence Portland cement quarries in the capacity of superintendent, but later entered the general contracting field and proved to be very successful.

John Hooper.

John Hooper, Sr., aged 76, a prominent brick manufacturer of Pittsburgh, Pa., died at 1020 Locust street, Jan. 3. He was born in Ireland and came to Pittsburgh in 1851. He organized the Hooper Sons Co., one of the leading brick manufacturing concerns in former days.

The Troy Wagon Works Co., Troy, Ohio, has prepared a booklet on the subject of Troy trailers that has a definite bearing upon the economy of transportation, and is applicable to almost every known commodity from crushed rock to ostrich feathers in bales. Since one-half the selling price to the consumer consists of the cost of transportation the achievement of Troy trailers is well worth careful study and prompt application. The cost of transportation is the much talked of high cost of living, only expressed another way, and it cannot be overcome without developing the economies to the minutest fraction in that all important study of the cost per ton mile.

A very attractive booklet has been issued by the Sandusky Portland Cement Co., of Cleveland, Ohio, bearing the title "Medusa Review." The pamphlet is devoted to the various uses of the Medusa products, and is replete with illustrations of buildings in which Medusa white Portland cement has been used.

"Facts, Figures and Photos," is the title of a pamphlet recently issued by the Ball Engine Co., of Erie, Pa. This is known also as Bulletin S-14, and contains a number of interesting photographs, together with data relative to the Erie shovel engaged in various classes of work. This booklet should find a place in the office of any firm using shovels of various kinds, and can be obtained by addressing the Ball Engine Co.

"The Terry Turbine" is the title of a new bulletin just issued by the Terry Steam Turbine Co., Hartford, Conn., giving a general description of the various turbine applications, and dealing particularly with various kinds of high, low and mixed pressure turbines.

A new catalogue describing the Fuller-Lehigh pulverizer mill is being distributed by the Lehigh Car Wheel & Axle Works, of Catasauqua, Pa. The catalogue is known as No. 70, and is replete with information covering sweep and fan discharge types of mills, illustrations of which are shown. The company will be pleased to forward a copy of this booklet to interested parties upon request.

The market place of the building material industry. Employment department, machinery wanted and for sale, etc. If your wants are not answered in this page, write a letter to this office.

THE FRANCIS PUBLISHING CO.
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Advertisements will be inserted in this section at the following rates:

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No display except the headings can be admitted.

Remittances should accompany the order. No extra charges for copy of paper containing the advertisement.

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WANTED—By young man position as Supt. or Manager of sand and gravel plant. Have had 15 years' experience in office and plant management. Am acquainted with nearly all classes of sand and gravel handling machinery. Address Box 1096, care ROCK PRODUCTS AND BUILDING MATERIALS.

WANTED—Have had 15 years' experience in the cement, lime and stone business, designing, constructing and operating plants, am open for a position in that line. Box 1094, care ROCK PRODUCTS AND BUILDING MATERIALS.

WANTED—Position as plaster salesman. Have had four years' experience and can furnish best of references. Address Box 1088, care ROCK PRODUCTS AND BUILDING MATERIALS.

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WANTED—Superintendent Gravel Pit. Man of experience in construction and operating—opportunity for investment if right party. Address Box 1095, care ROCK PRODUCTS AND BUILDING MATERIALS.

For Portable Steel Garages and Portable Buildings of all kinds. A high quality product in all respects. Good opportunity for the right man. Address Department K, Trussed Concrete Steel Co., Youngstown, Ohio.

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WANTED—Good second-hand stone crusher to pulverize limestone for agricultural purposes, that can be operated by 15 or 20 horsepower. Address, SCHMIDT CUT STONE CO., South Bend, Ind.

WANTED—Large swing jaw crusher. 24"x30" or larger. Give particulars and lowest cash price. Address Box 1090, care ROCK PRODUCTS AND BUILDING MATERIALS.

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FOR SALE—Two Class A-14 Ruggles-Coles Rock Dryers. In first-class condition. Address Box 1089 care ROCK PRODUCTS AND BUILDING MATERIALS.

For Sale or Rent—Two new American 8x10 inch pumps, 125 foot head run 17 days at quarry in Kankakee, Illinois. 400 ft. of spiral asphaltic pipe. Address E. C. G., care ROCK PRODUCTS AND BUILDING MATERIALS, 537 S. Dearborn St., Chicago.

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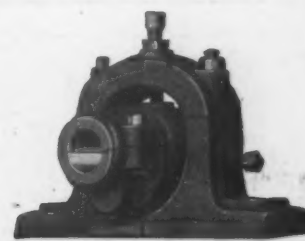


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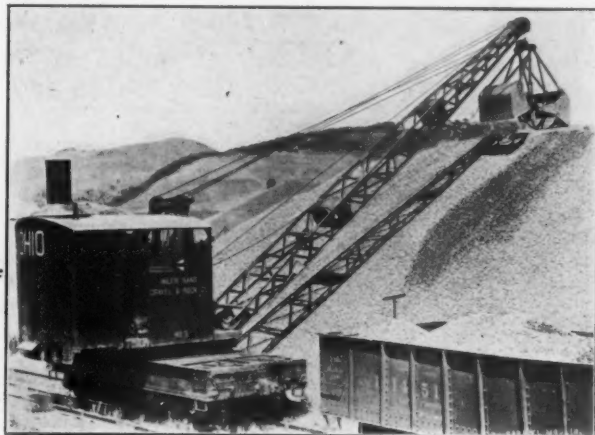
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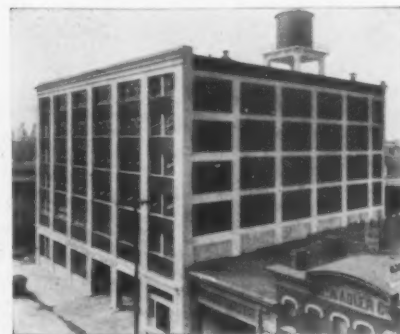
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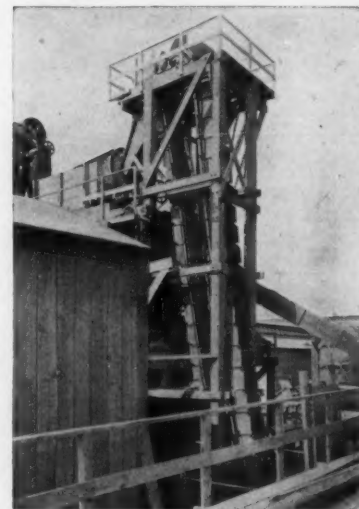


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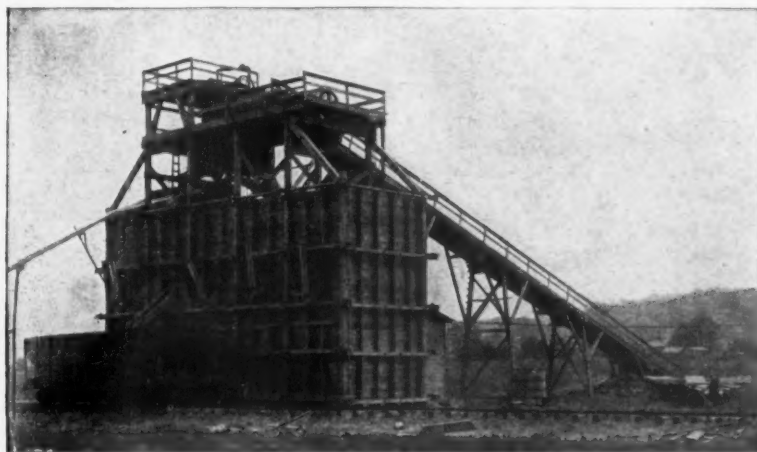
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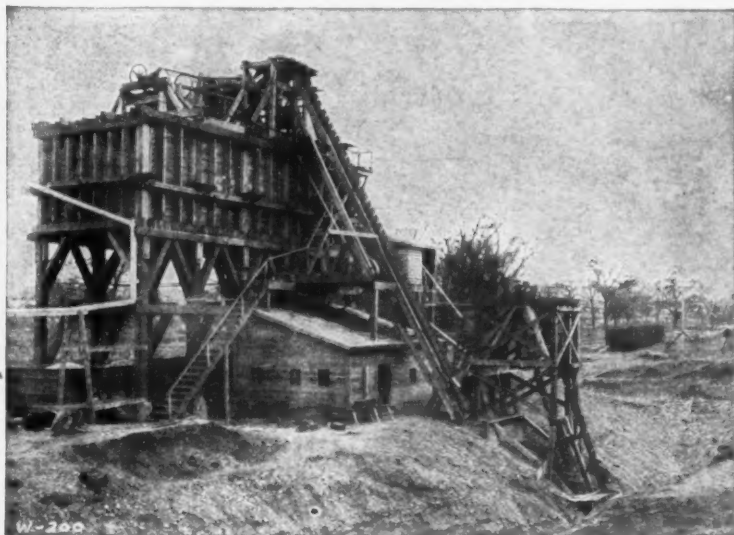
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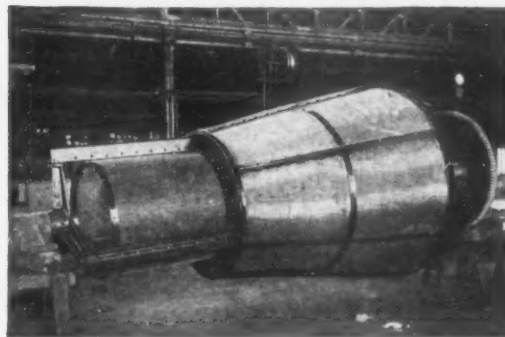


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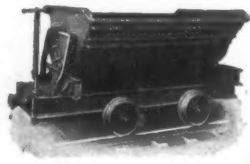
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